

School District Organization in South Carolina: Evaluating Performance and Fiscal Efficiency

Prepared for
The Education Oversight Committee
Miley and Associates January 2003

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Changes in Districts

Table 1|
Changes in Number of School Districts

Year	No. Districts	Largest ADM	Smallest ADM	Average ADM	Ave. Exp. Per Pupil	Highest <u>Exp. Per Pupil</u>	Lowest Exp. Per Pupil
1950	1,220	36,578	2,398	412	\$117	\$151	\$80
1960	108	42,489	371	4,920	\$179	\$261	\$121
1970	95	53,174	442	6,319	\$508	\$629	\$366
1980	92	52,042	525	6,596	\$1,381	\$1,812	\$1,042
1990	91	50,620	576	6,757	\$3,788	\$5,045	\$3,187
2000	86	58,019	443	7,539			

Source: State Superintendents Annual Report

Number of Districts by Size

Table 2

Number of Districts by Size Range and Population in Range

District size	Number districts	Percent Of districts	Percent of students
State	85	100.0	100.0
25,000 or more	5	5.9	27.8
10,000 – 24,999	13	15.3	29.4
7,500 - 9,999	12	14.1	16.2
5,000 – 7,499	9	10.6	8.3
2,500 – 4,999	23	27.0	12.8
1,500 – 2,499	9	10.6	2.9
1 – 1,499	14	16.5	2.6

Source: Rankings, South Carolina State Department of Education, 1999-2000.

United States Comparison

Number of Districts

District size	Number districts	Percentage Of districts	Percentage of students
US	14,571	100.0%	100.0%
25,000 or more	238	1.7	32.1
10,000-24,999	579	4.0	18.7
7,500-9,999	320	2.2	6.0
5,000-7,499	716	4.9	9.4
2,500-4,999	2,068	14.2	15.6
1,500-2,499	1,893	13.0	8.0
1-1,499	8,757	60.0	10.2

Source: US Department of Education, National Center for Educational Statistics,
Common Core of Data, 1999-2000.

Comparison

Table 5

Comparison of Number of Districts by Size for SC and US

District size	Percentage of districts		Percentage of students	
	US	SC	US	SC
25,000 or more	1.7	5.9	32.1	27.8
10,000-24,999	4.0	15.3	18.7	29.4
7,500-9,999	2.2	14.1	6.0	16.2
5,000-7,499	4.9	10.6	9.4	8.3
2,500-4,999	14.2	27.0	15.6	12.8
1,500-2,499	13.0	10.6	8.0	2.9
1-1,499	60.0	16.5	10.2	2.6

Fact Sheet

Variable	Minimum	District	Maximum	District	Average
Area (Sq. Miles)	48.6	Sumter 17	1226.6	Berkeley	356
Population (2000 Census)	2,537	Marion 4	394,261	Greenville	46,193
Density (Students/Sq. Mile)	2.8	McCormick	181.6	Sumter 17	27.95
Enrollment	396	Marion 4	58,949	Greenville	7,602
White Enrollment	22	Bamberg 2	40,543	Greenville	4,252
Minority Enrollment	303	Greenwood 51	26,332	Charleston	3,416
% Minority	7.80%	Anderson 1	98.10%	Bamberg 2	50.80%
# of Elementary Schools	1	17 Districts	50	Greenville	7.1
Ave Elementary Enrollment	206	Marion 4	1272	Barnwell 45	519
# of Middle Schools	1	32 Districts	19	Charleston	3.2
Ave Middle School Enrollment	187	Barnwell 19	1116	Richland 2	577
# of High Schools	1	47 Districts	15	Greenville	2.3
Ave HS Enrollment	190	Marion 4	2533	Spartanburg 6	900
% at Poverty Level	18.40%	York 3	97.50%	Clarendon 1	62.70%

Fact Sheet Continued

Variable	Minimum	District	Maximum	District	Average
% Black Participation Grades 9-12	82.80%	Hampton 2	100.00%	Many	97.50%
% White Participation Grades 9 -12	32.40%	Bamberg 2	100.00%	Greenwood 52	86.00%
Change in Enrollment 1990 - 2000	-58.70%	Union	65.30%	York 4	1.50%
% Meeting English	42.20%	Florence 4	88.20%	York 4	68.00%
% Meeting Math	31.20%	Lee	84.60%	York 4	49.10%
Absolute Grade	2.0	Hampton 2	3.4	York 4	2.71
	2.0	Jasper			
	2.0	Lee			
	2.1	Florence 4			
Millage Value	\$3,485	Marion 4	\$1,200,000	Greenville	\$140,405
Ability Index	0.0003	Marion 4	0.1037	Greenville	0.0116
Tax Effort	0.66	Clarendon 2	1.85	Spartanburg 3	1.13
% Budget From Local	14%	Barnwell 19	80%	York 2	33.50%
Ave Teacher Salary	\$31,068	Marion 3	\$41,919	Spartanburg 3	\$37,038
Student Teacher Ratio	7.1	Lexington 4	23.9	Chester	19.5

Diversity in South Carolina School Districts

- **The size of districts ranges from 396 to 58,949 students**
- **The physical size of the districts range from 48.6 to 1,226 sq mi**
- **The density of the districts range from 3 to 182 students/sq mi**
- **The change in student enrollment from 1990 to 2000 ranges from -59% to +65%**

Diversity in South Carolina School Districts

- **The cost per student ranges from \$5,330 to \$9,024**
- **The student teacher ratio ranges from 7.8 to 23.9**
- **The racial composition ranges from 7.8% minority to 98%**
- **Average teacher salaries range from \$31,068 to \$41,919**

Diversity in South Carolina School Districts

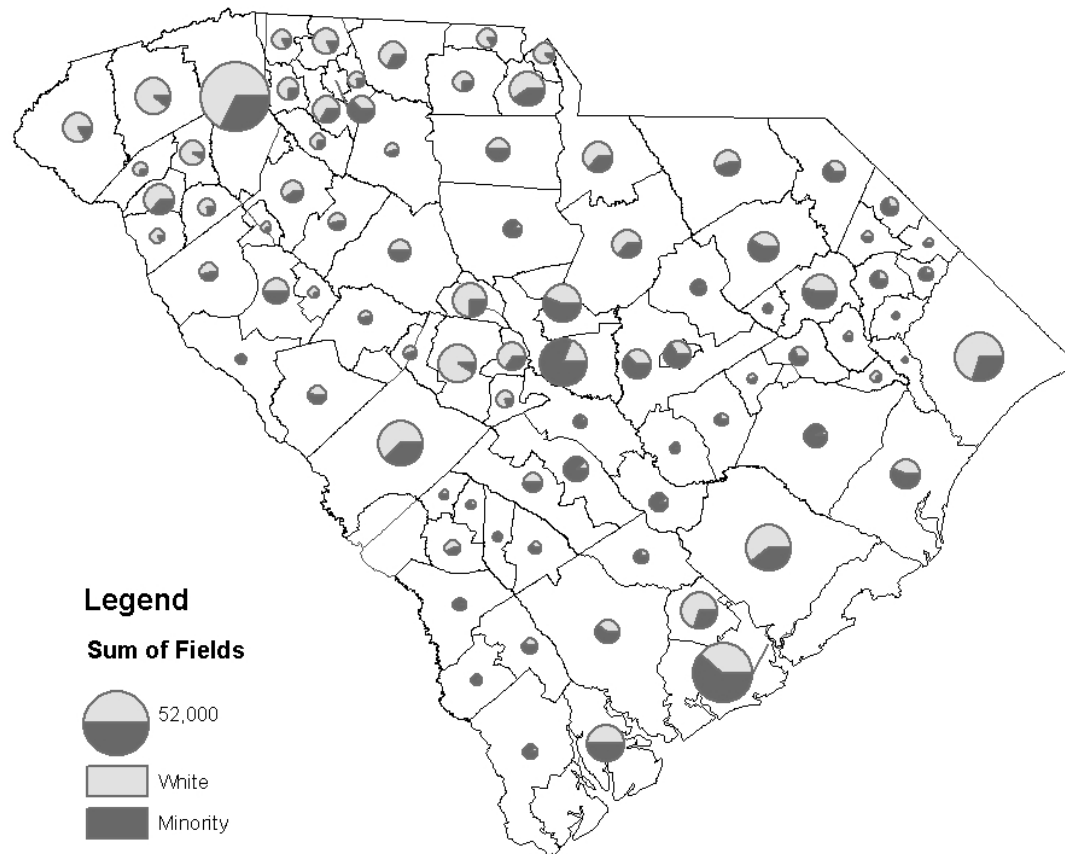
- **Number of schools per district varies widely. There are 17 districts with 1 elementary school and one with 50 schools**
- **Average enrollment in Elem schools ranges from 206 to 1,272**
- **Average district HS enrollment ranges from 190 to 2,533**

Diversity in South Carolina School Districts

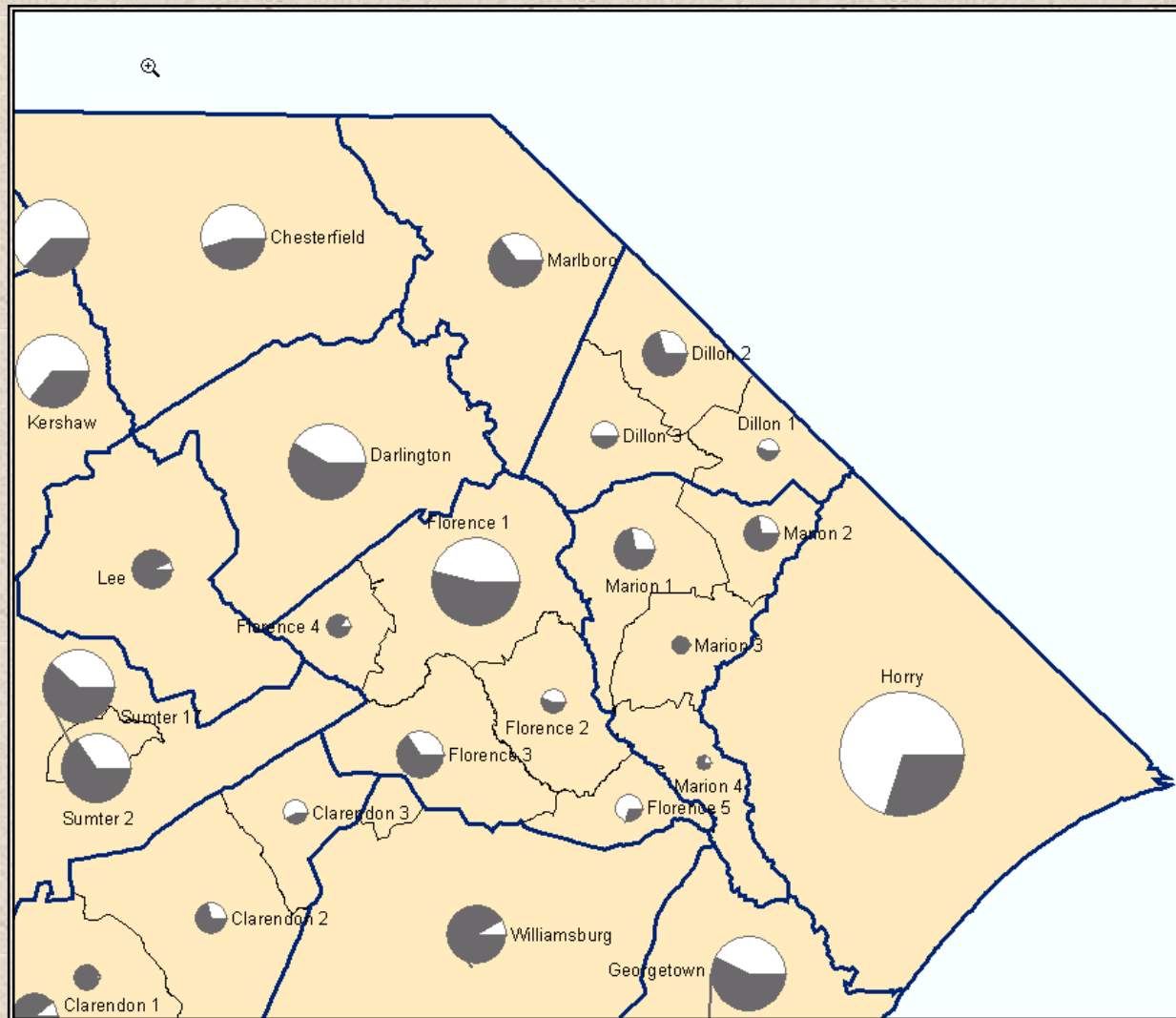
- **The value of a mill of property tax ranges from \$7,000 to over \$1,200,000**
- **The percent of districts' budgets from local sources ranges from 14% to 80%**

Enrollment and Race

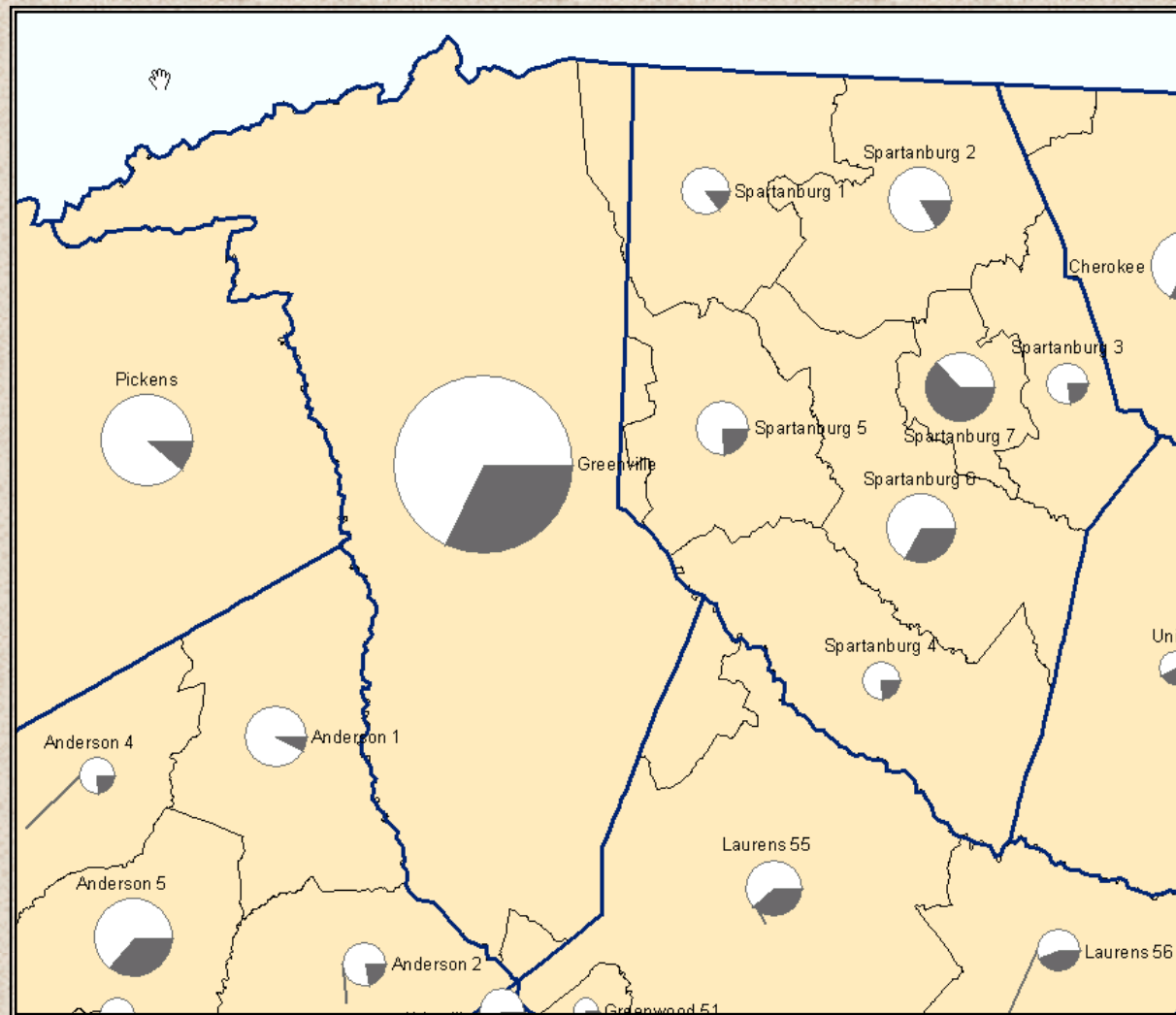
District Enrollment by Race 2001



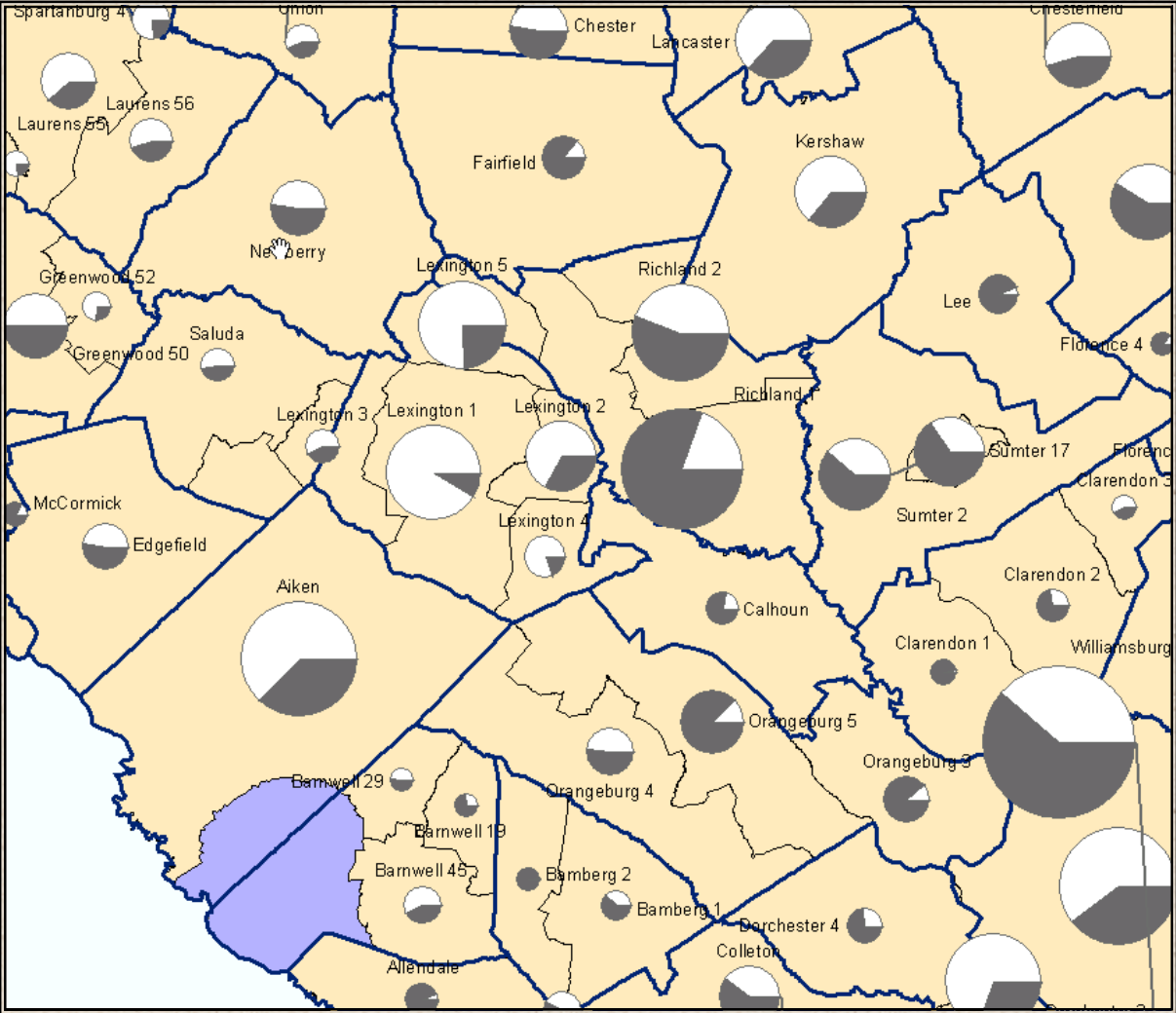
Pee Dee – Numerous Small Districts



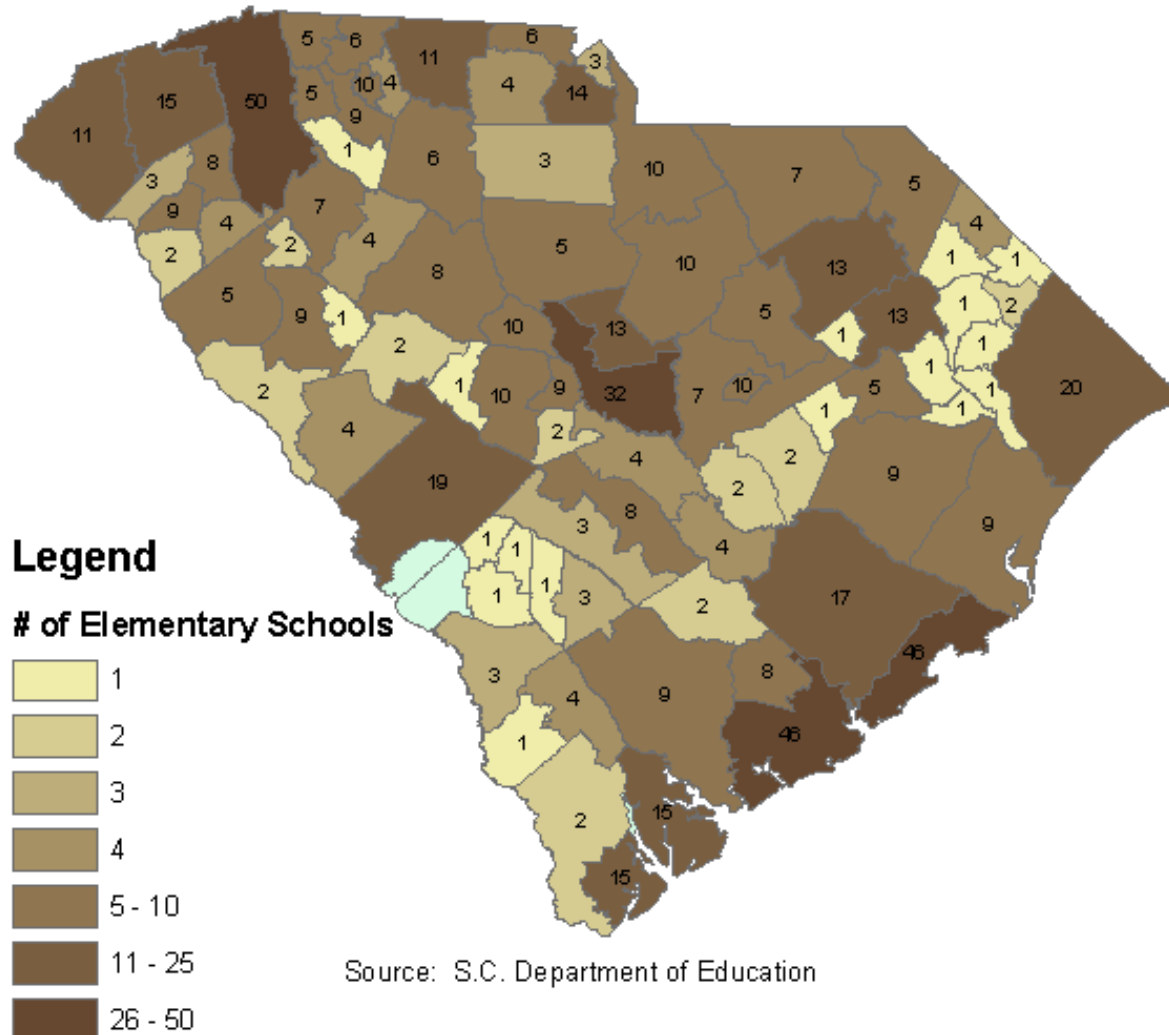
Greenville and Spartanburg Very Different Approach



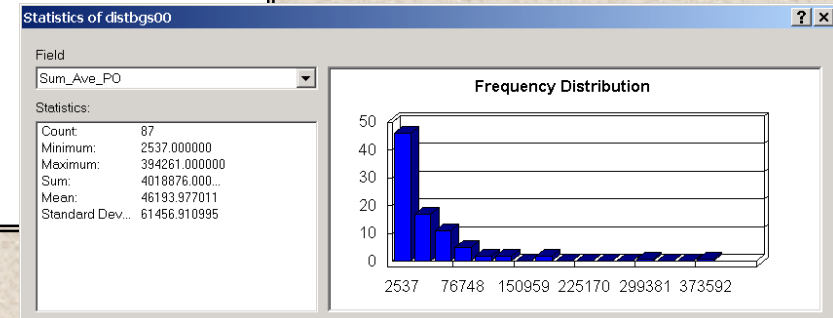
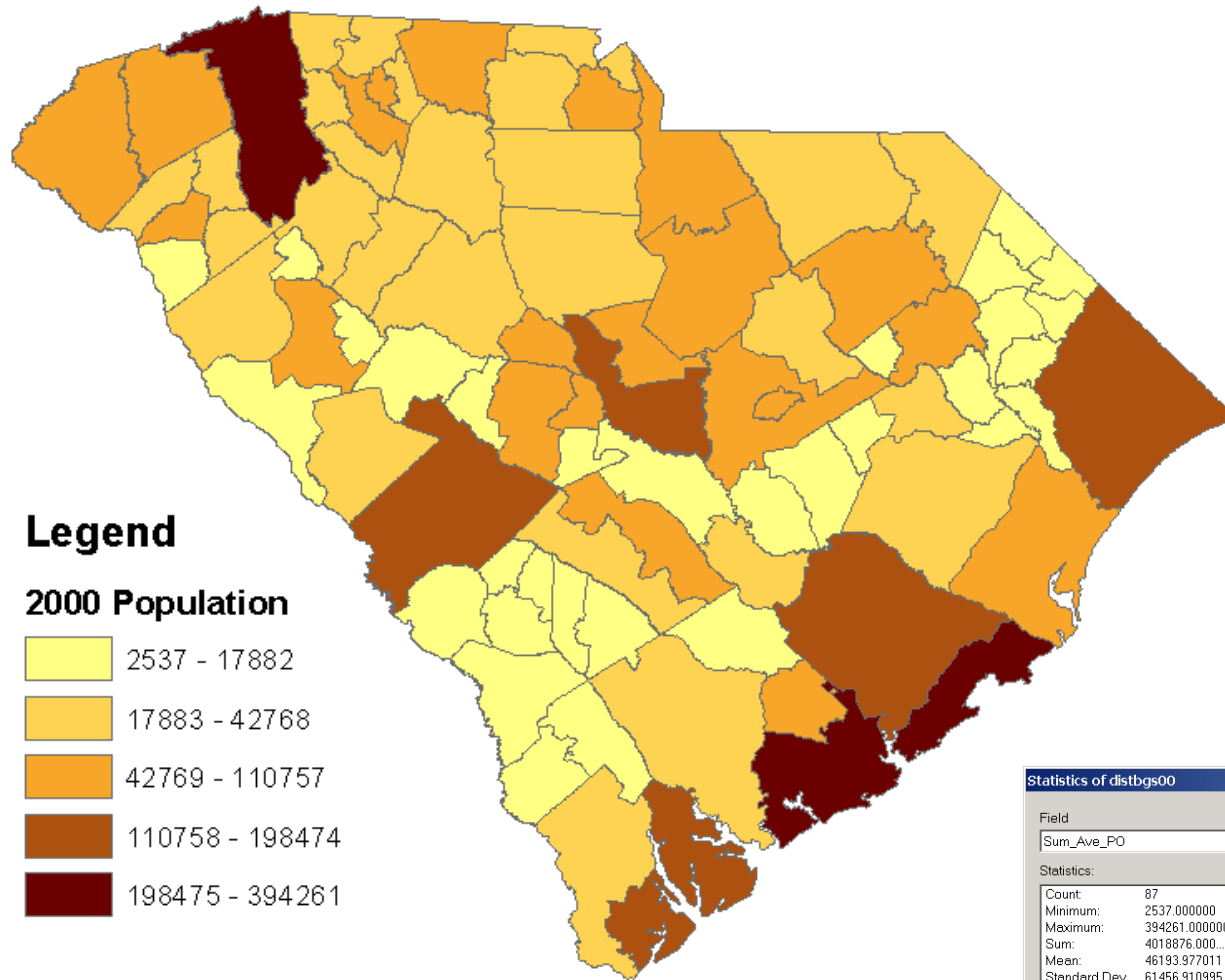
Central Midlands – Great Differences



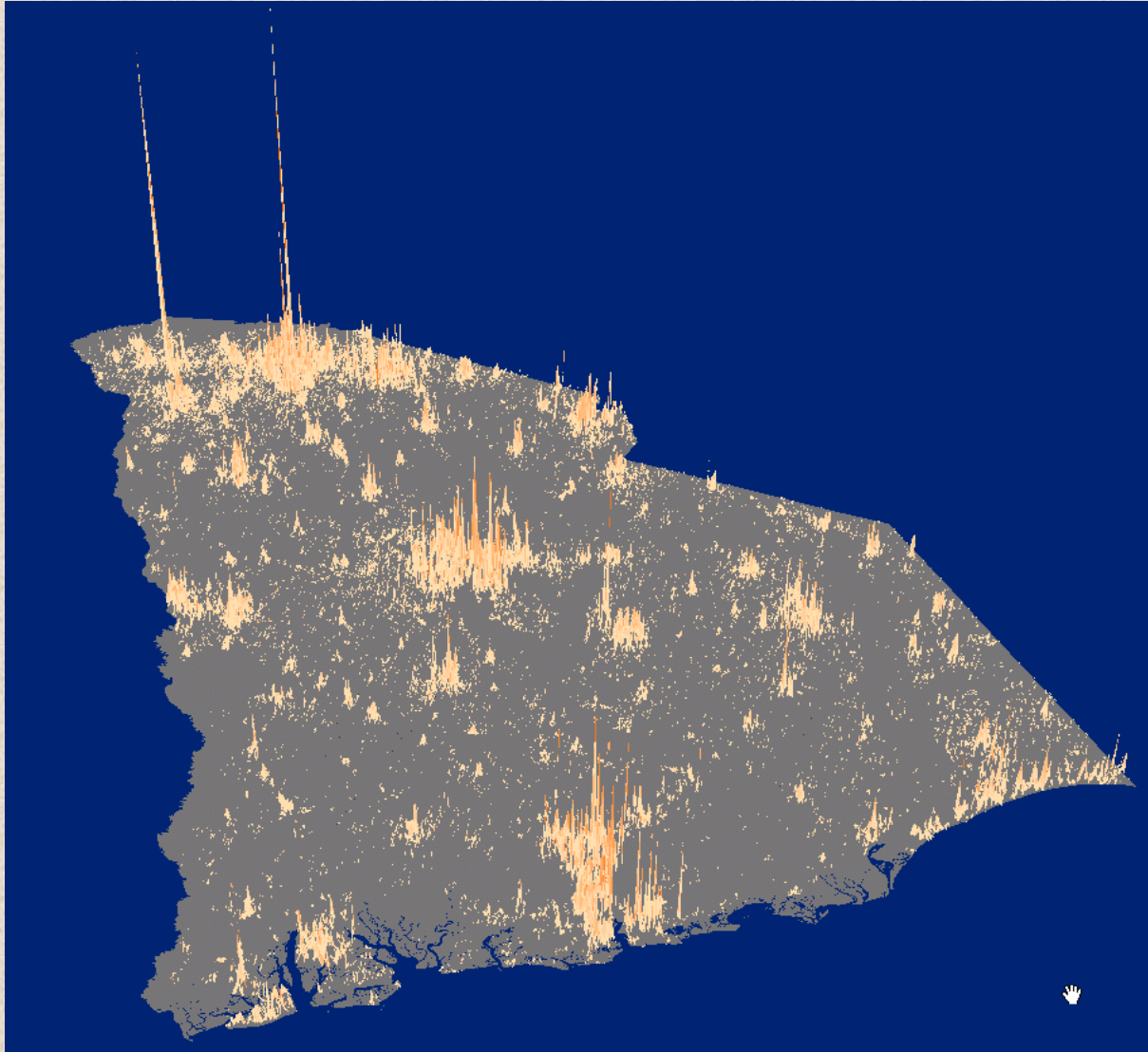
Number of Elementary Schools



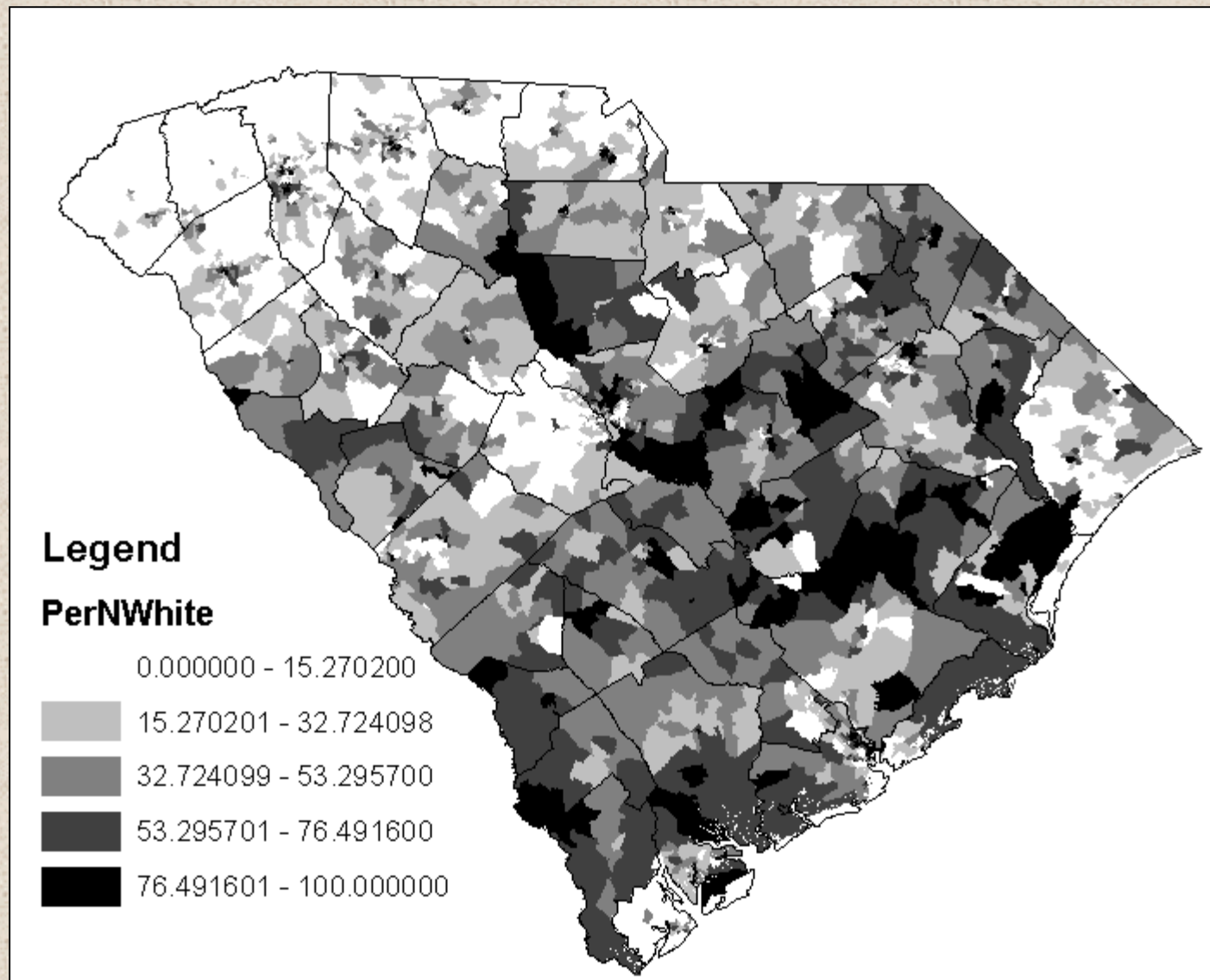
2000 Census Population



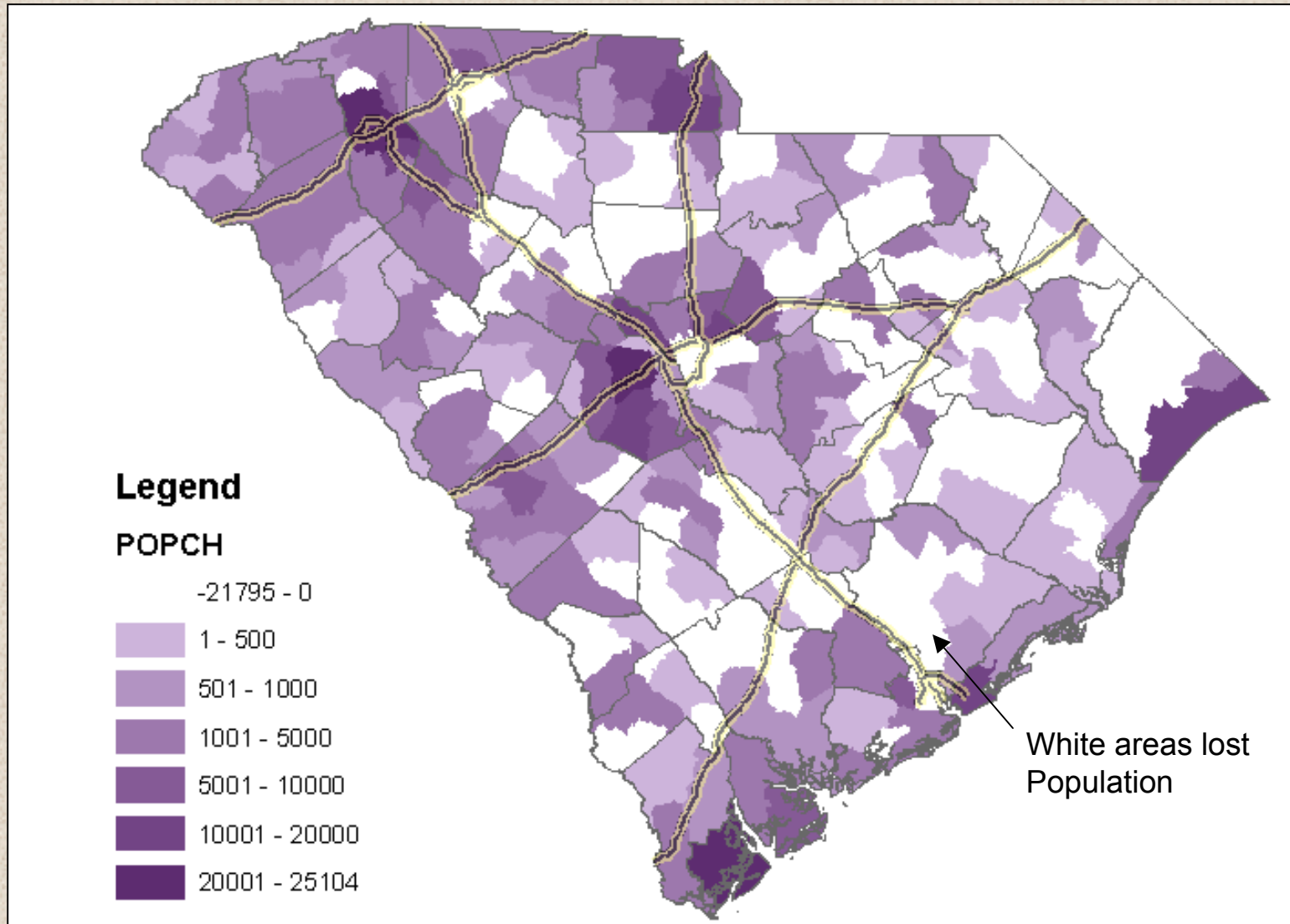
Where do people live?



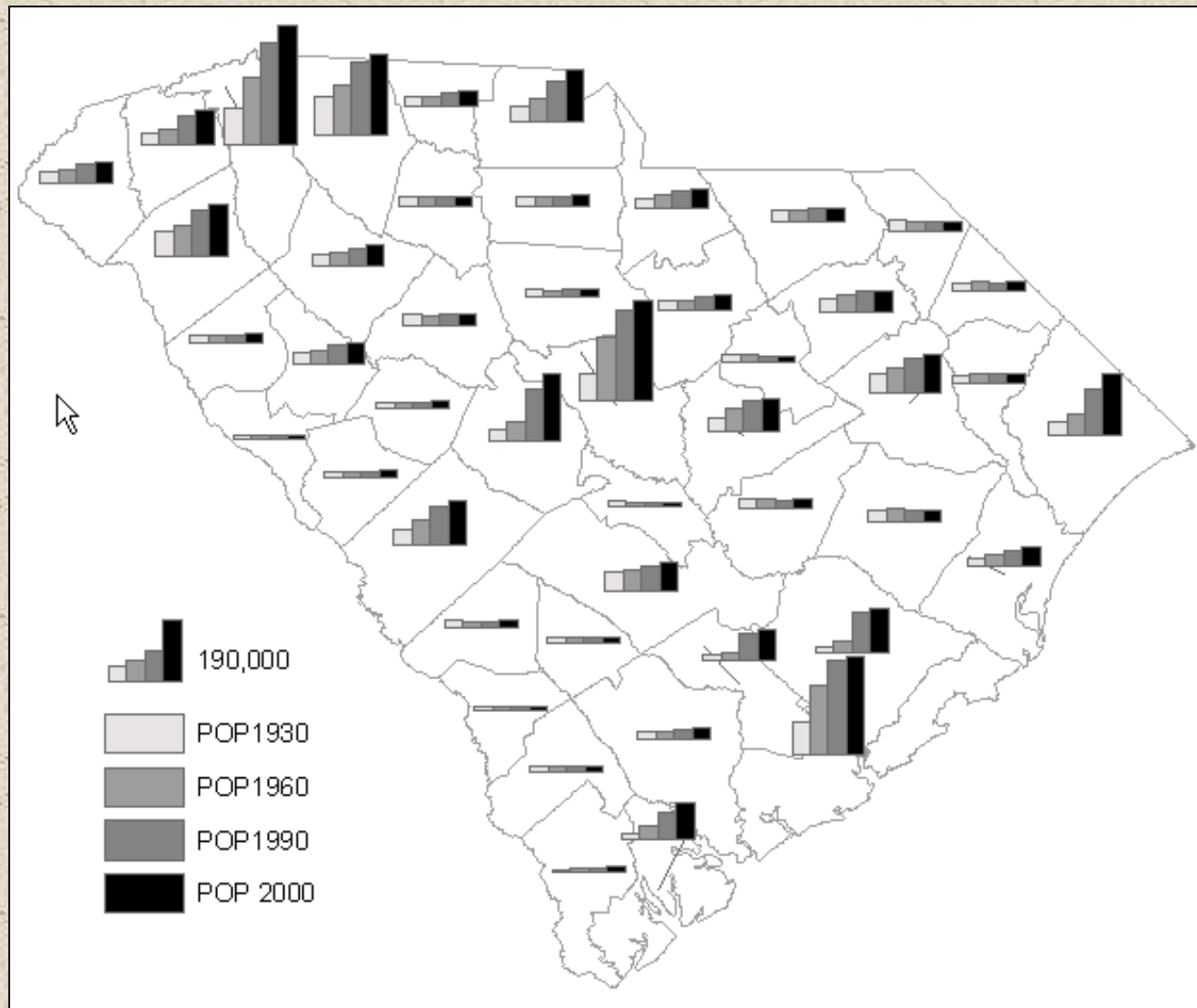
Racial Composition of S.C.



Census County Divisions Population Change

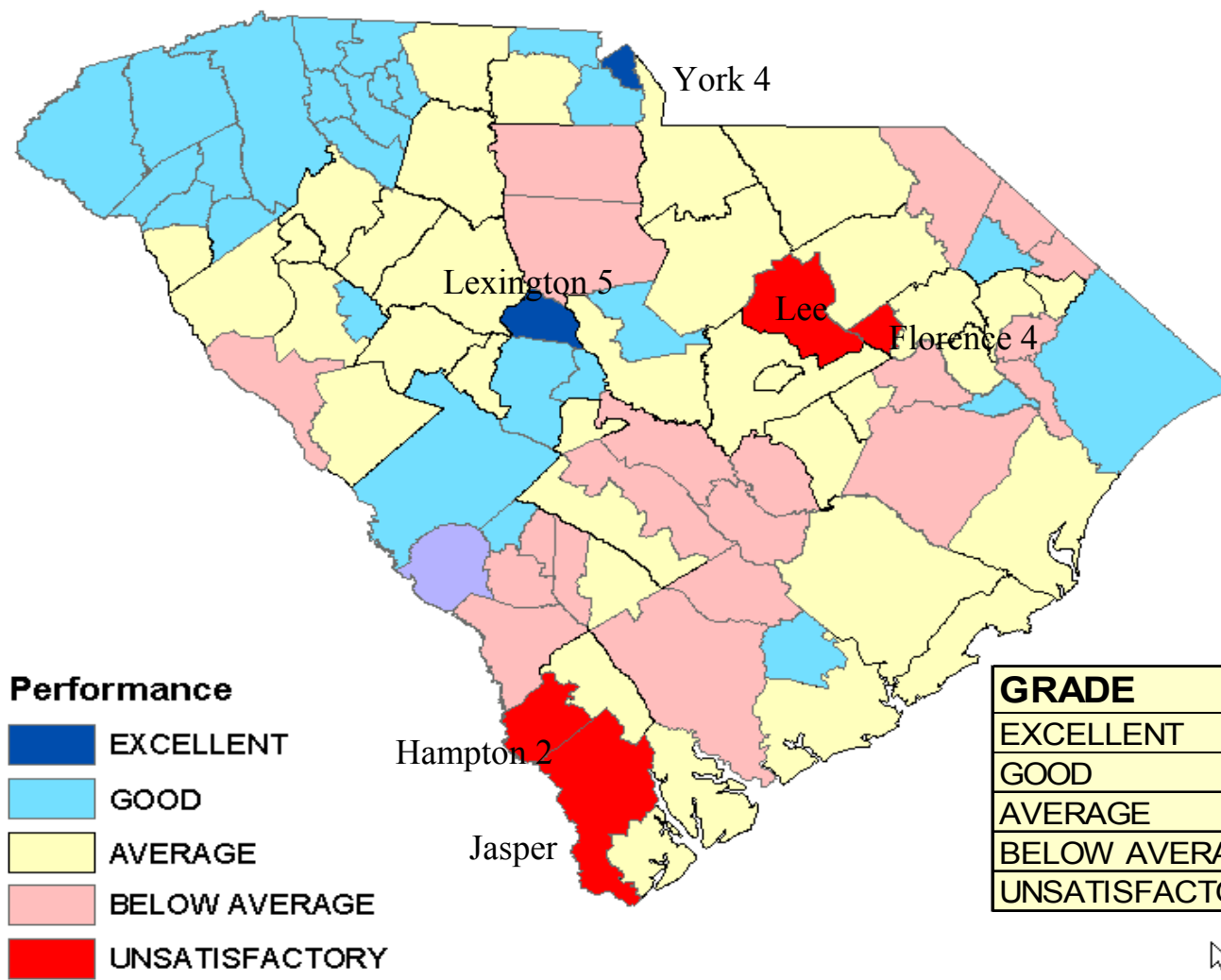


Population Change since 1930



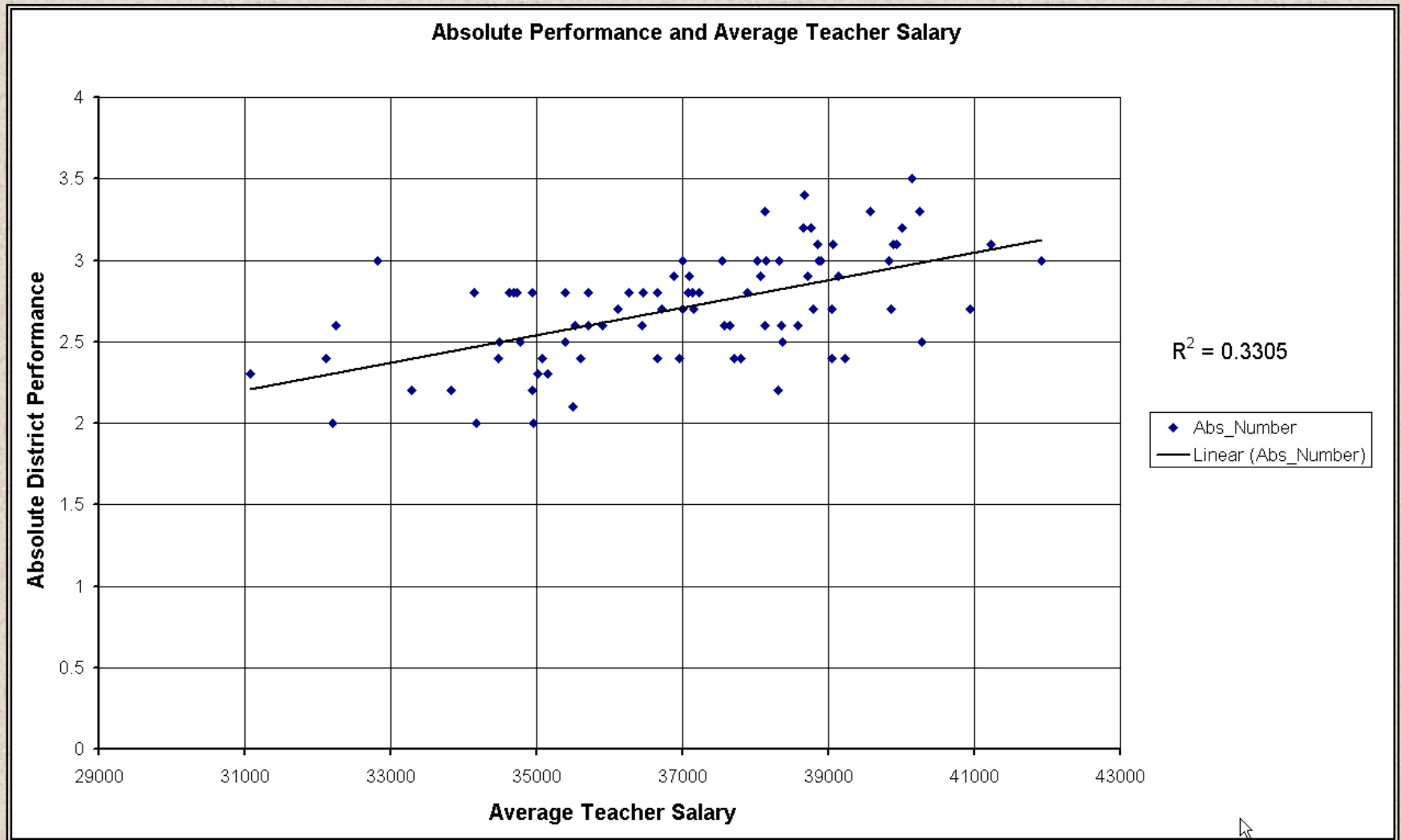
Report Cards

2001 School District Report Card

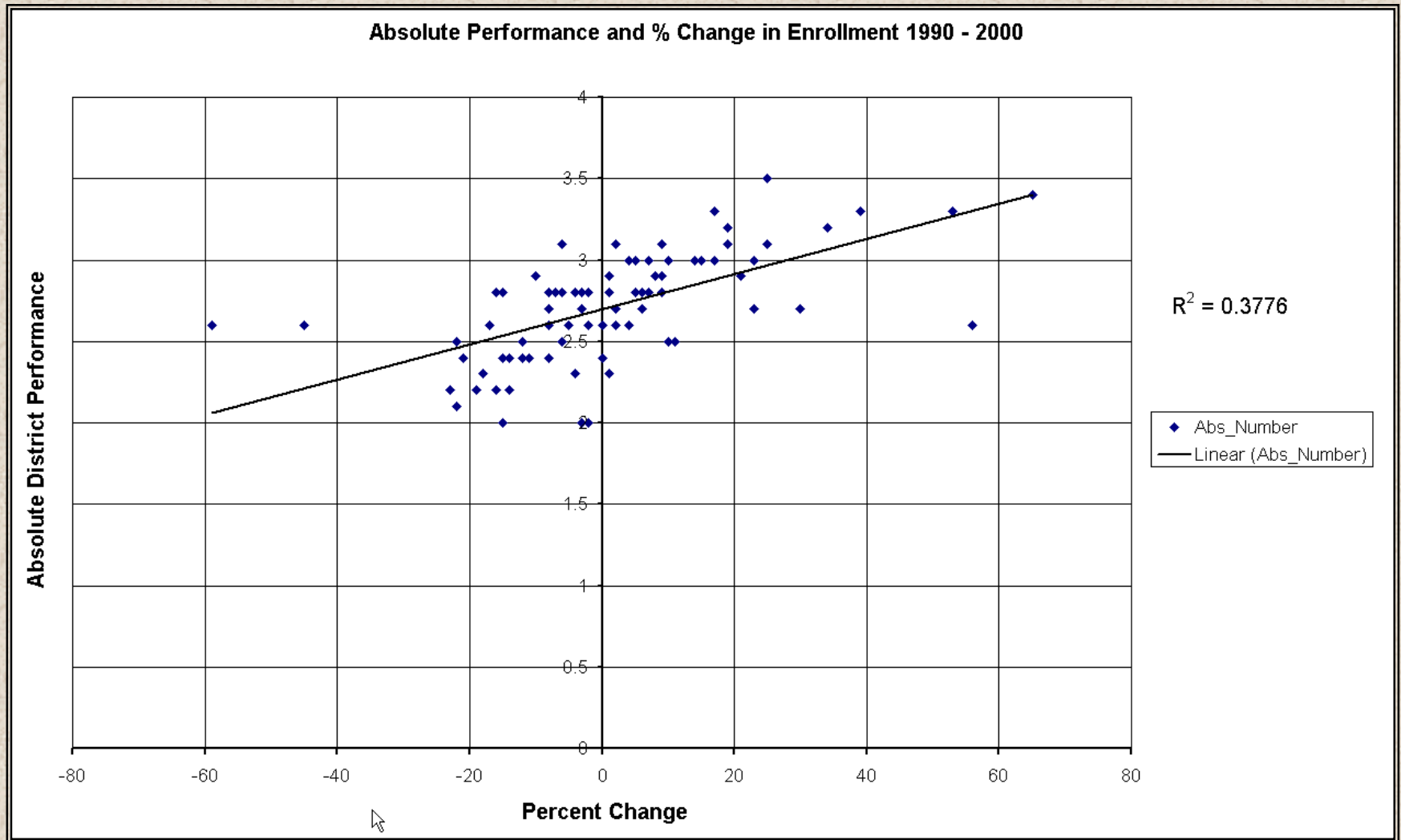


GRADE	NUMBER
EXCELLENT	2
GOOD	26
AVERAGE	34
BELOW AVERAGE	20
UNSATISFACTORY	4

Does Teacher Salary Matter?



Does performance impact Enrollment ?



Enrollments

DISTRICT GRADE	Enrollment	ELEMENTARY ENROLLMENT	MIDDLE SCHOOL ENROLLMENT	HIGH SCHOOL ENROLLMENT	NUMBER OF ELEMENTARY SCHOOLS	NUMBER OF MIDDLE SCHOOLS	NUMBER OF HIGH SCHOOLS
EXCELLENT	9955.0	626.0	783.0	1470.5	6.5	3.0	2.0
GOOD	11065.3	562.5	663.3	1113.7	9.3	3.9	2.8
AVERAGE	8061.4	507.7	590.7	881.1	8.0	3.6	2.6
BELOW AVERAGE	3183.4	468.1	448.5	658.7	3.6	2.0	1.5
UNSATISFACTORY	2108.0	552.8	455.3	609.8	2.3	1.5	1.0

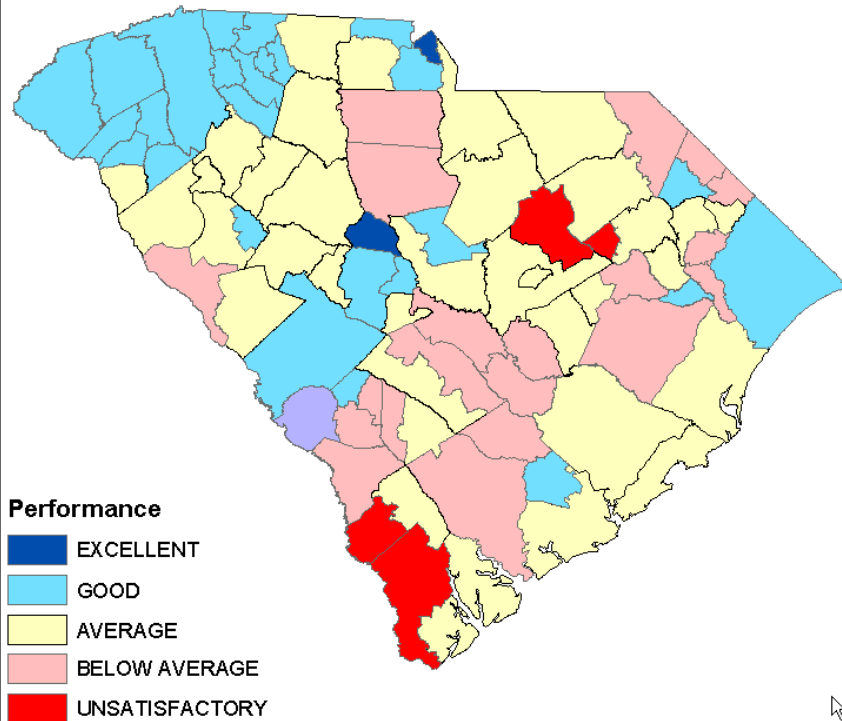
Good to excellent districts average about 10,000 students

There is a big drop from 8000 to 3100 between average and below average school districts

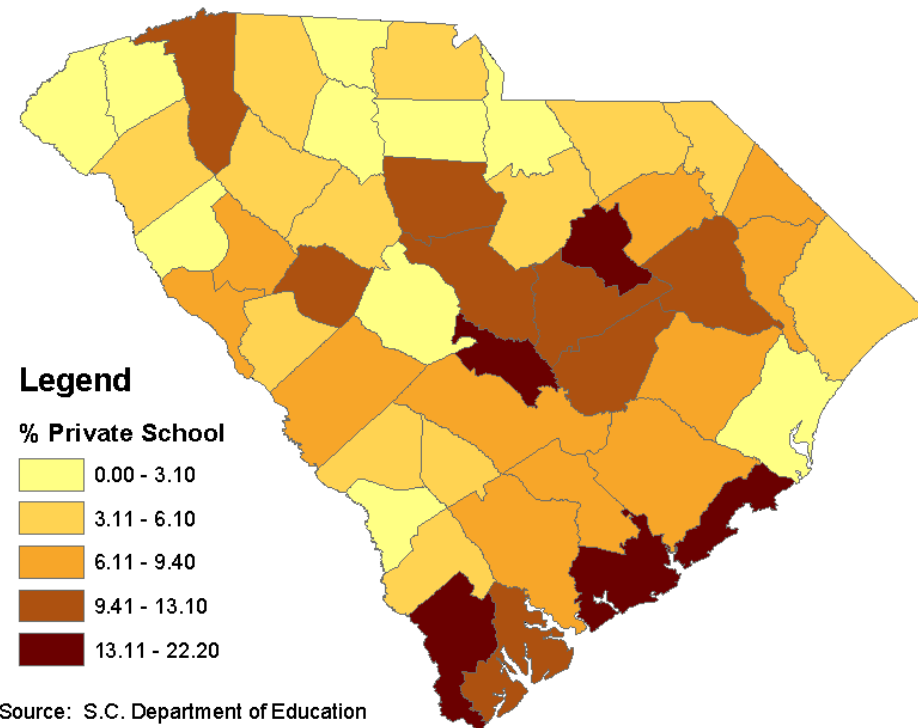
The worst performing districts have only one high school

Relationship of School Performance and Private School Enrollment

2001 School District Report Card



Percent in Private Schools



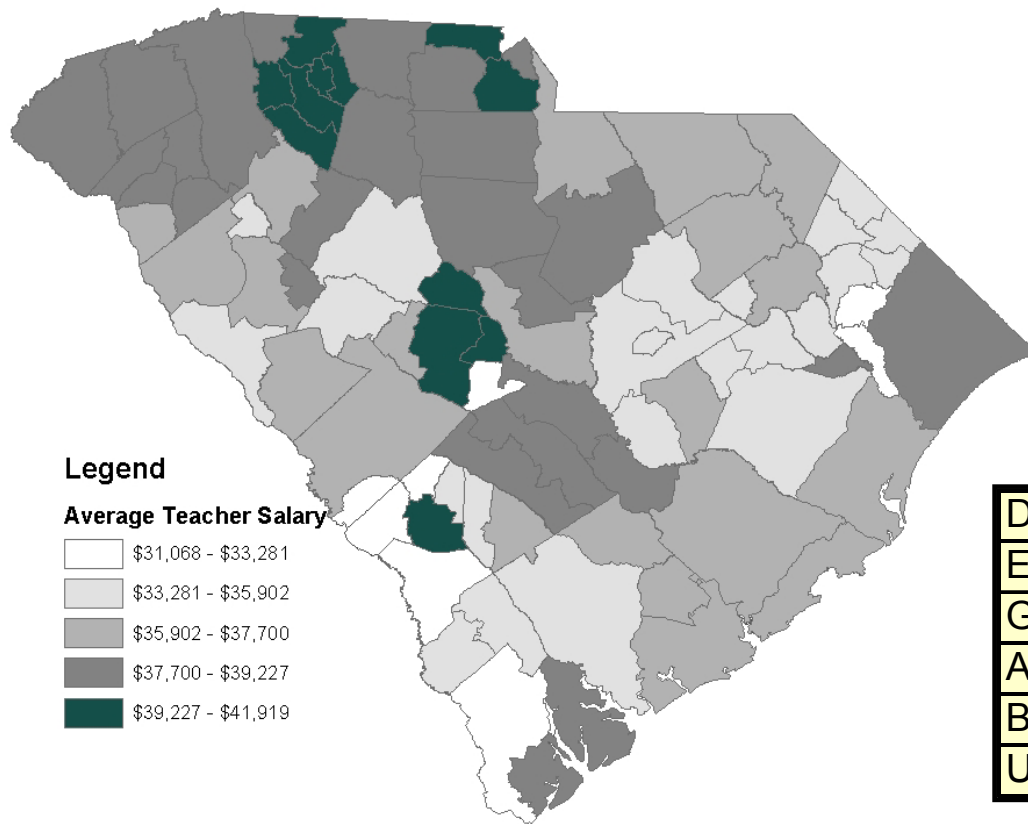
Salaries and Qualifications Matter

District Grade	% Parent Attending Conferences	Drop Out Rate	Student Teacher Ratio	% Masters	Ave Teacher Salary
EXCELLENT	76.80%	1.9000	21.8500	50.3500	\$39,408
GOOD	80.24%	2.4846	20.7615	40.6615	\$38,786
AVERAGE	80.12%	3.1324	19.3235	36.7441	\$36,503
BELOW AVERAGE	72.33%	3.9150	18.3250	31.9550	\$36,008
UNSATISFACTORY	60.45%	3.0500	18.4000	27.6750	\$34,210

Student / Teacher ratio are lower in the poorest performing districts

Salaries Matter

Average Teacher's Salary



Legend

Average Teacher Salary

	\$31,068 - \$33,281
	\$33,281 - \$35,902
	\$35,902 - \$37,700
	\$37,700 - \$39,227
	\$39,227 - \$41,919

\$5,000 Difference

District Grade	Ave Teacher Salary
EXCELLENT	\$39,408
GOOD	\$38,786
AVERAGE	\$36,503
BELOW AVERAGE	\$36,008
UNSATISFACTORY	\$34,210

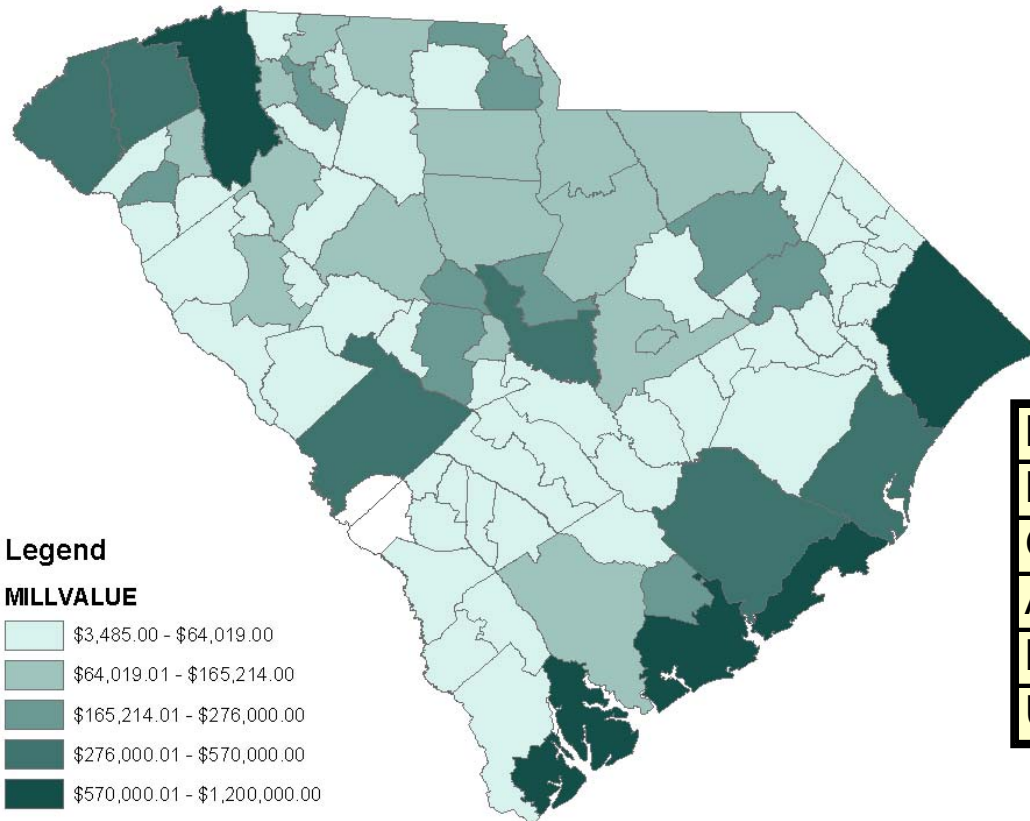
Local Financial Resources

District Grade	Mill Value	Ability to Pay	Tax Effort	% Local Budget
EXCELLENT	\$175,244	0.0137	1.1495	41.00%
GOOD	\$215,857	0.0179	1.1198	39.62%
AVERAGE	\$151,743	0.0125	1.0949	30.76%
BELOW AVERAGE	\$43,106	0.0038	1.2119	31.25%
UNSATISFACTORY	\$22,677	0.0019	1.0522	25.00%

Excellent districts having **mileage values eight times** that of the unsatisfactory districts. The biggest factors are the economic base or property values within the district. It is not the effort. In fact, the greatest effort is found in the districts with below average schools. They just don't have the assets to support the schools and hire good teachers.

What is the local Tax Base?

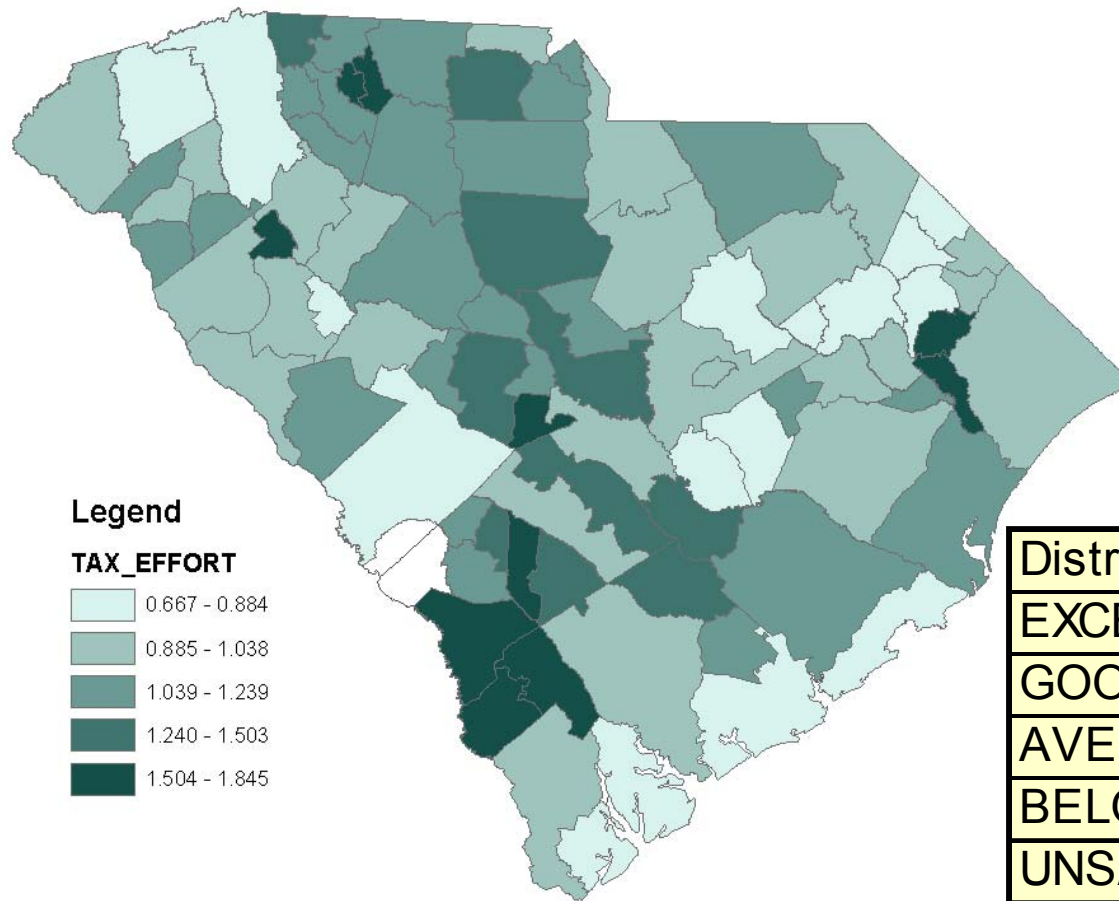
Revenue Generated Per Mill of Property Tax



District Grade	Mill Value
EXCELLENT	\$175,244
GOOD	\$215,857
AVERAGE	\$151,743
BELOW AVERAGE	\$43,106
UNSATISFACTORY	\$22,677

Its not the effort

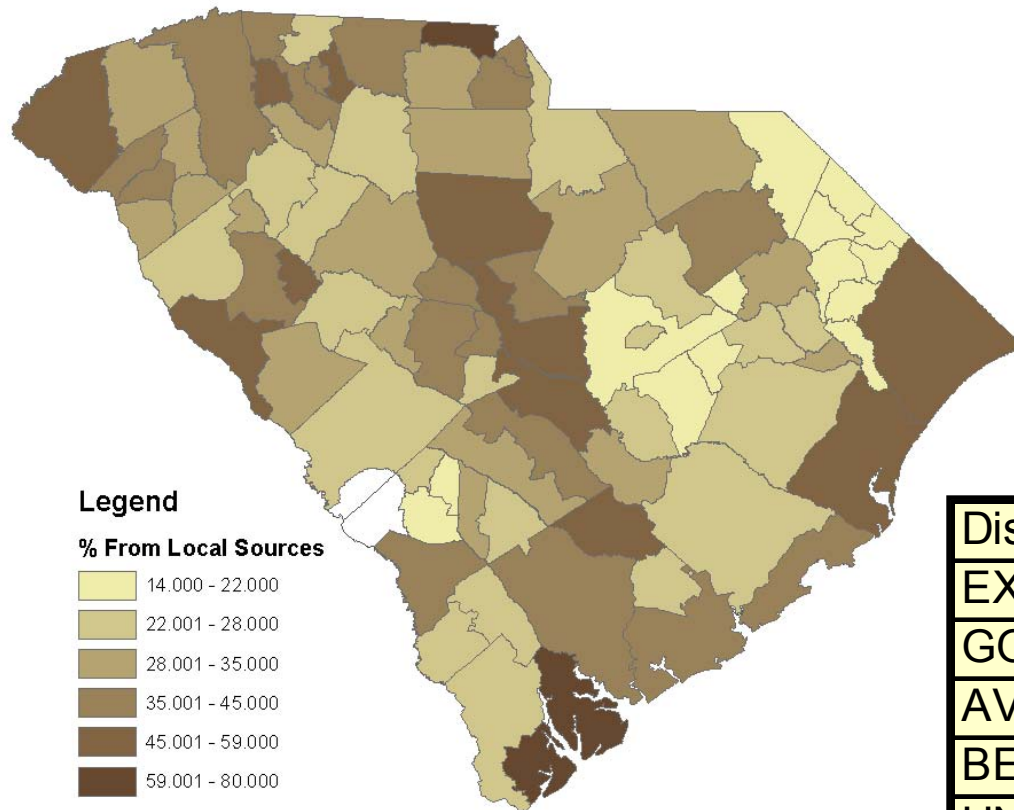
Local Tax Effort



District Grade	Tax Effort
EXCELLENT	1.1495
GOOD	1.1198
AVERAGE	1.0949
BELOW AVERAGE	1.2119
UNSATISFACTORY	1.0522

Local Revenue

Percent of Budget From Local Revenue



District Grade	% Local Budget
EXCELLENT	41.00%
GOOD	39.62%
AVERAGE	30.76%
BELOW AVERAGE	31.25%
UNSATISFACTORY	25.00%

Expenditures

Percentage of District Expenditures

RATING	INSTRUCTIONAL	TEACHERS	LEADERSHIP	OPERATIONAL	INSTRUCTIONAL SUPPORT
Excellent	60.26%	54.20%	6.98%	19.50%	13.26%
Good	59.17%	52.35%	8.37%	19.49%	12.90%
Average	58.36%	50.24%	9.26%	19.39%	12.92%
Below Avg	55.38%	48.32%	10.73%	21.21%	12.67%
Unsatisfactory	54.38%	34.88%	10.36%	21.71%	13.54%

Better performing districts can spend a greater proportion of budget on instruction and teachers

\$1,200 Per Student Difference

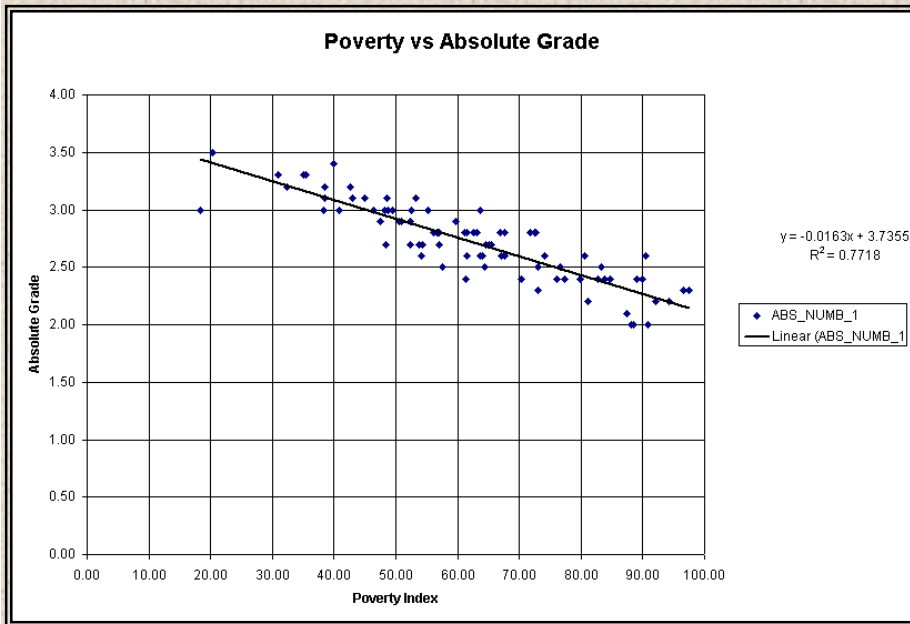
Expenditures Per Student

RATING	TOTAL	INSTRUCTIONAL	LEADERSHIP	OPERATIONAL	INSTRUCTIONAL SUPPORT
Excellent	\$6,875	\$4,141	\$481	\$1,338	\$916
Good	\$6,977	\$4,114	\$584	\$1,367	\$907
Average	\$7,007	\$4,085	\$650	\$1,361	\$906
Below Avg	\$8,014	\$4,398	\$873	\$1,720	\$1,021
Unsatisfactory	\$8,005	\$4,351	\$833	\$1,735	\$1,086

Even though the unsatisfactory districts are spending almost \$1,200 per student more than the excellent districts ***the results are terrible***. They are spending too much on fixed costs for leadership and operational costs and not enough on teacher's salaries and hiring better qualified teachers with masters degrees.

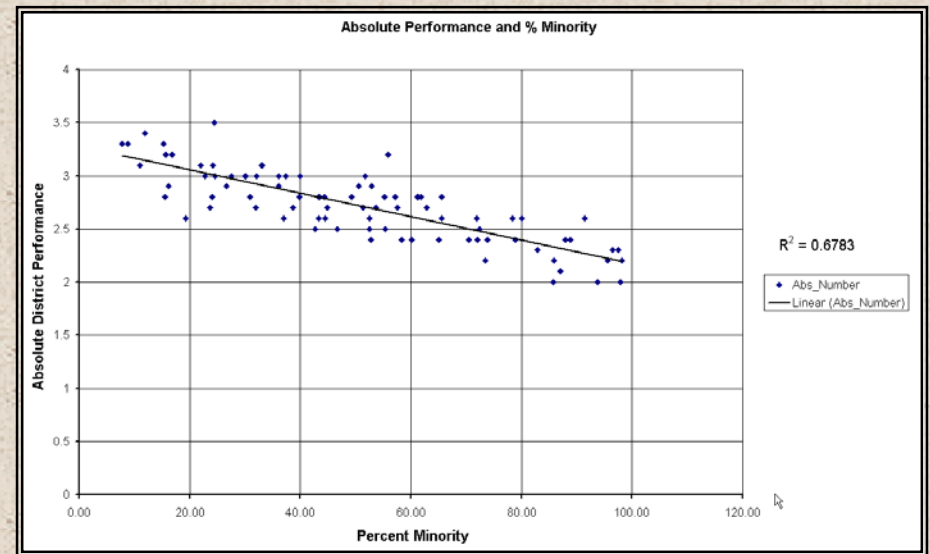
Poverty is a big factor

Poverty



$R^2 = .77$

% Minority

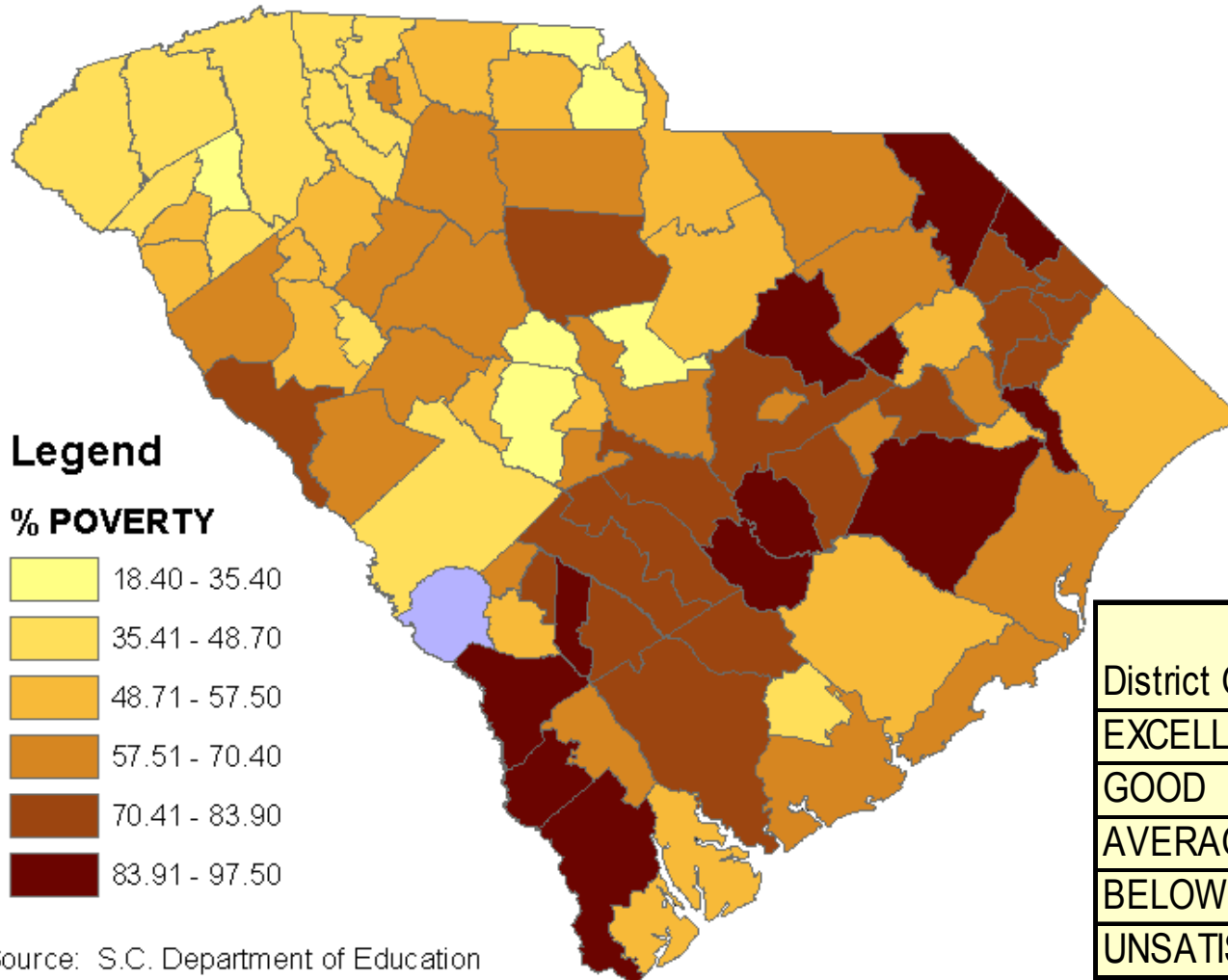


$R^2 = .67$

Poverty Matters

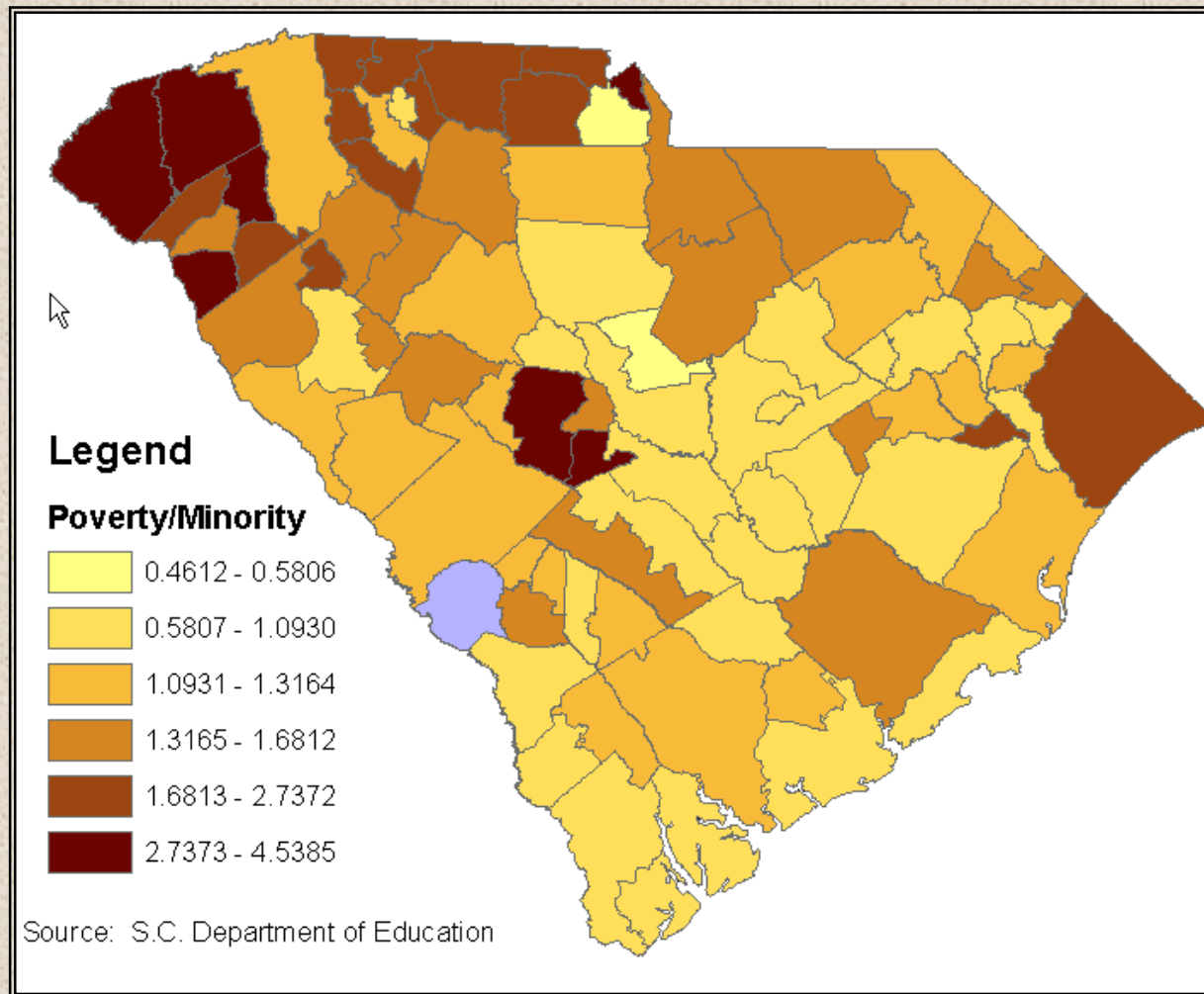
District Grade	Number	Minority	Poverty
EXCELLENT	2	18.15%	30.10%
GOOD	26	29.17%	45.97%
AVERAGE	34	49.03%	62.80%
BELOW AVERAGE	20	77.05%	82.46%
UNSATISFACTORY	4	91.10%	88.73%

Percent at Poverty Level

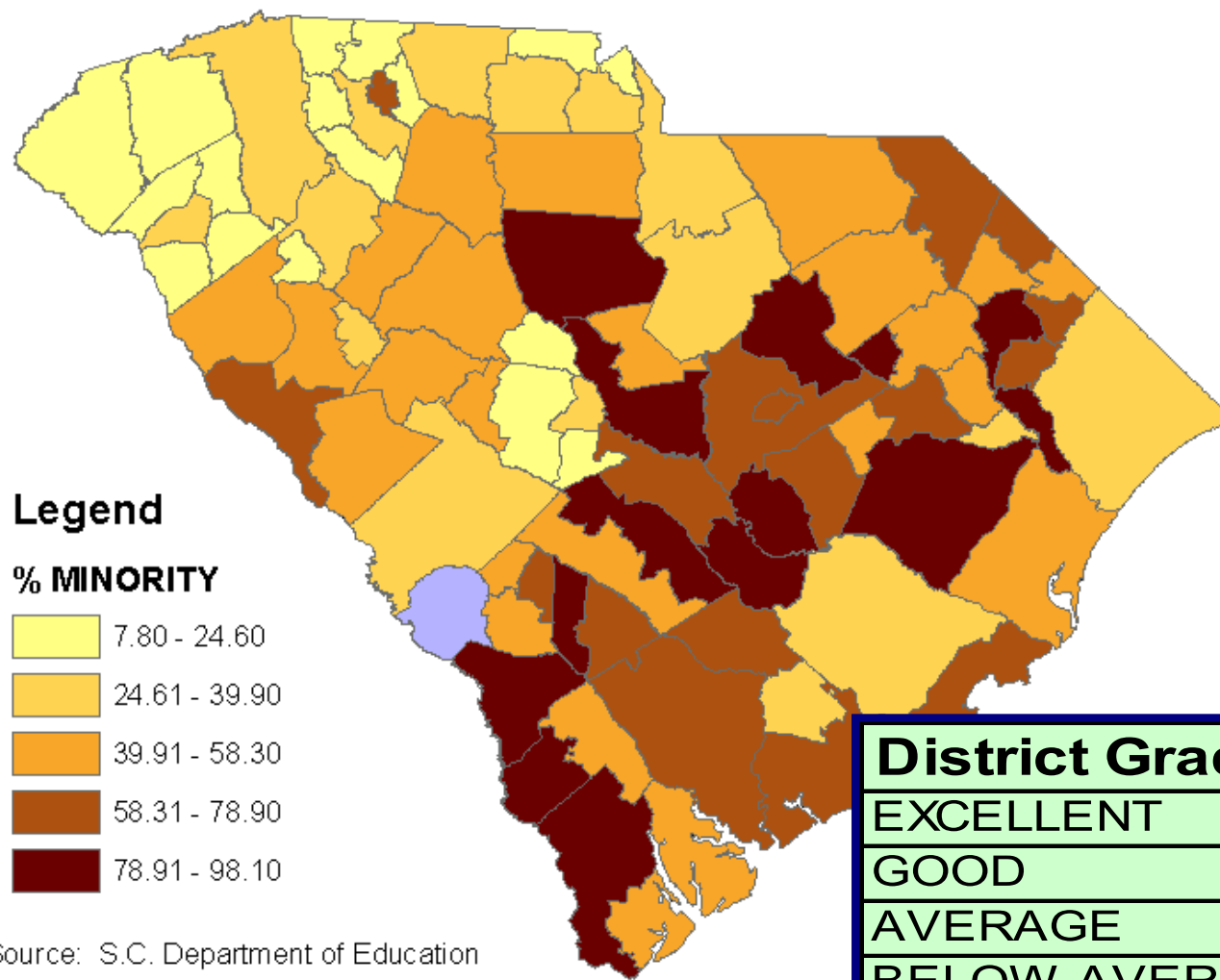


District Grade	Number	% Poverty
EXCELLENT	2	30.10%
GOOD	26	45.97%
AVERAGE	34	62.80%
BELOW AVERAGE	20	82.46%
UNSATISFACTORY	4	88.73%

Ratio of Poverty / Minority



Percent Minority Enrollment



District Grade	% Minority
EXCELLENT	18.1500
GOOD	29.1692
AVERAGE	49.3412
BELOW AVERAGE	76.5250
UNSATISFACTORY	91.1000

The Quality of Schools Affects Enrollment by Race

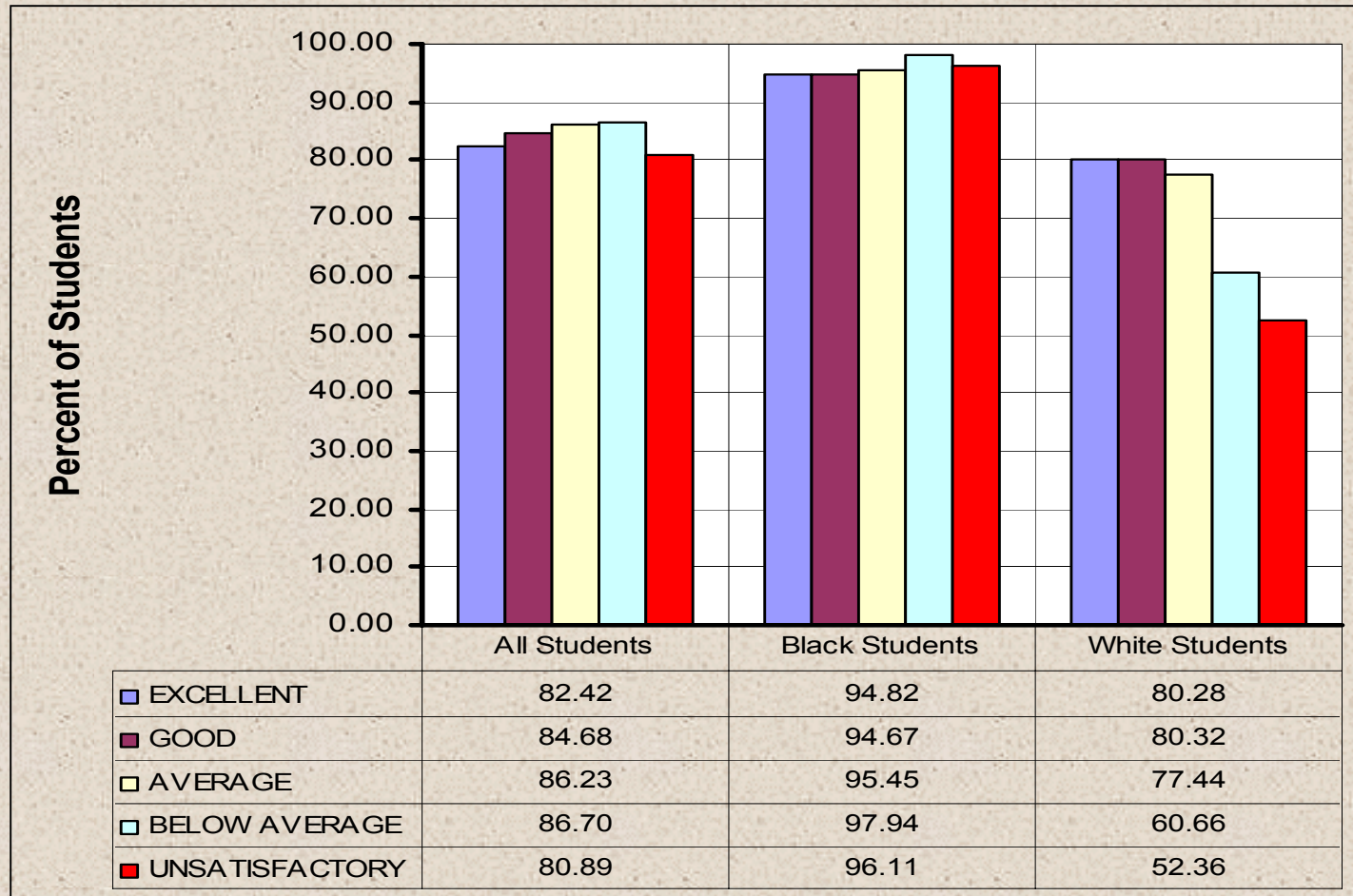
White Student Participation Rates

District Grade	Kindergarden	Grades 1-8	Grades 9-12
EXCELLENT	80.28	92.01	96.50
GOOD	80.32	90.87	93.26
AVERAGE	77.44	85.87	88.45
BELOW AVERAGE	60.66	74.25	77.64
UNSATISFACTORY	52.36	49.26	54.60

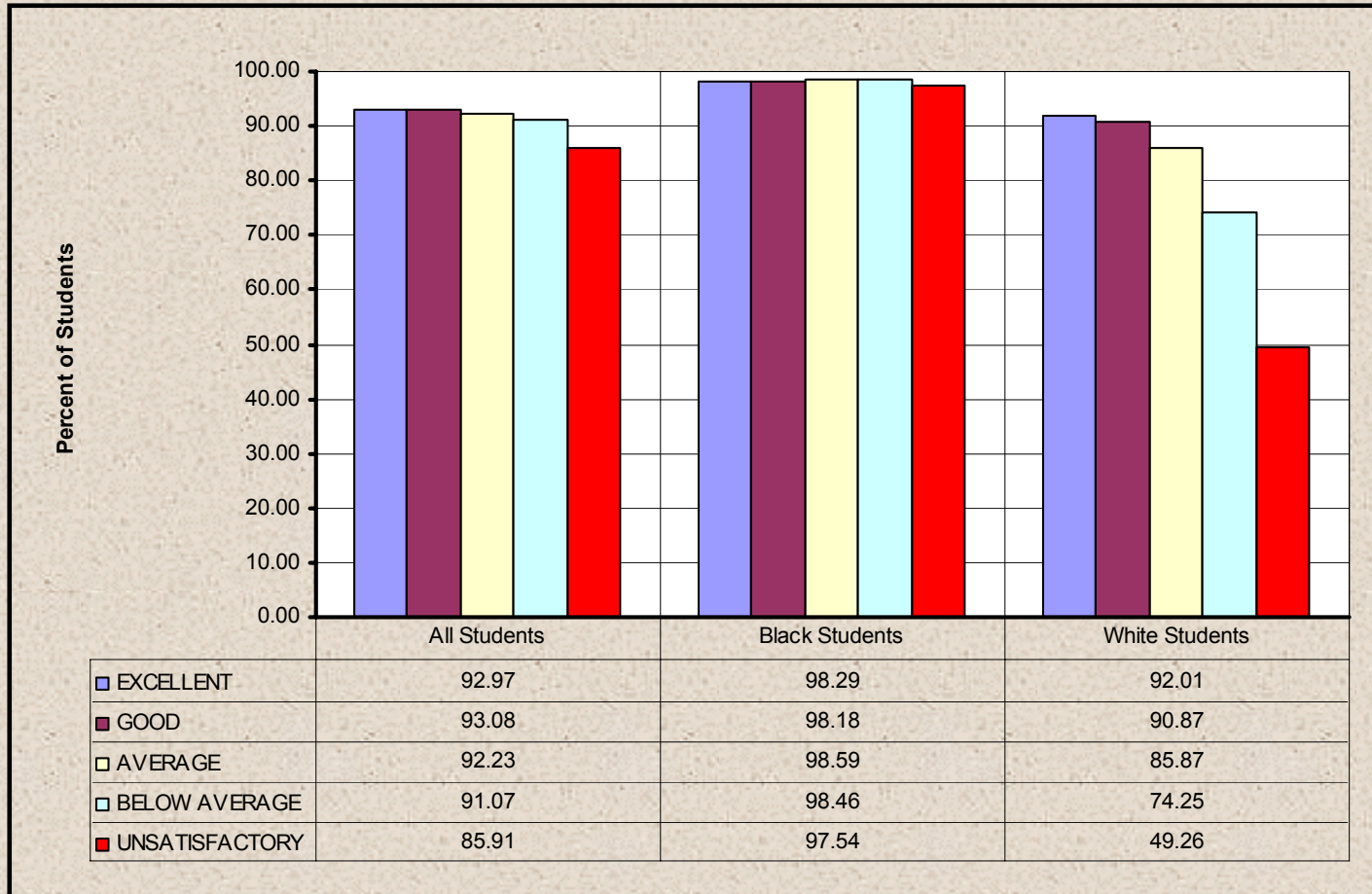
Black Student Participation Rates

District Grade	Kindergarden	Grades 1-8	Grades 9-12
EXCELLENT	94.82	98.29	97.82
GOOD	94.67	98.18	98.03
AVERAGE	95.45	98.59	97.39
BELOW AVERAGE	97.94	98.46	98.10
UNSATISFACTORY	96.11	97.54	92.76

Public School Kindergarten % by Race

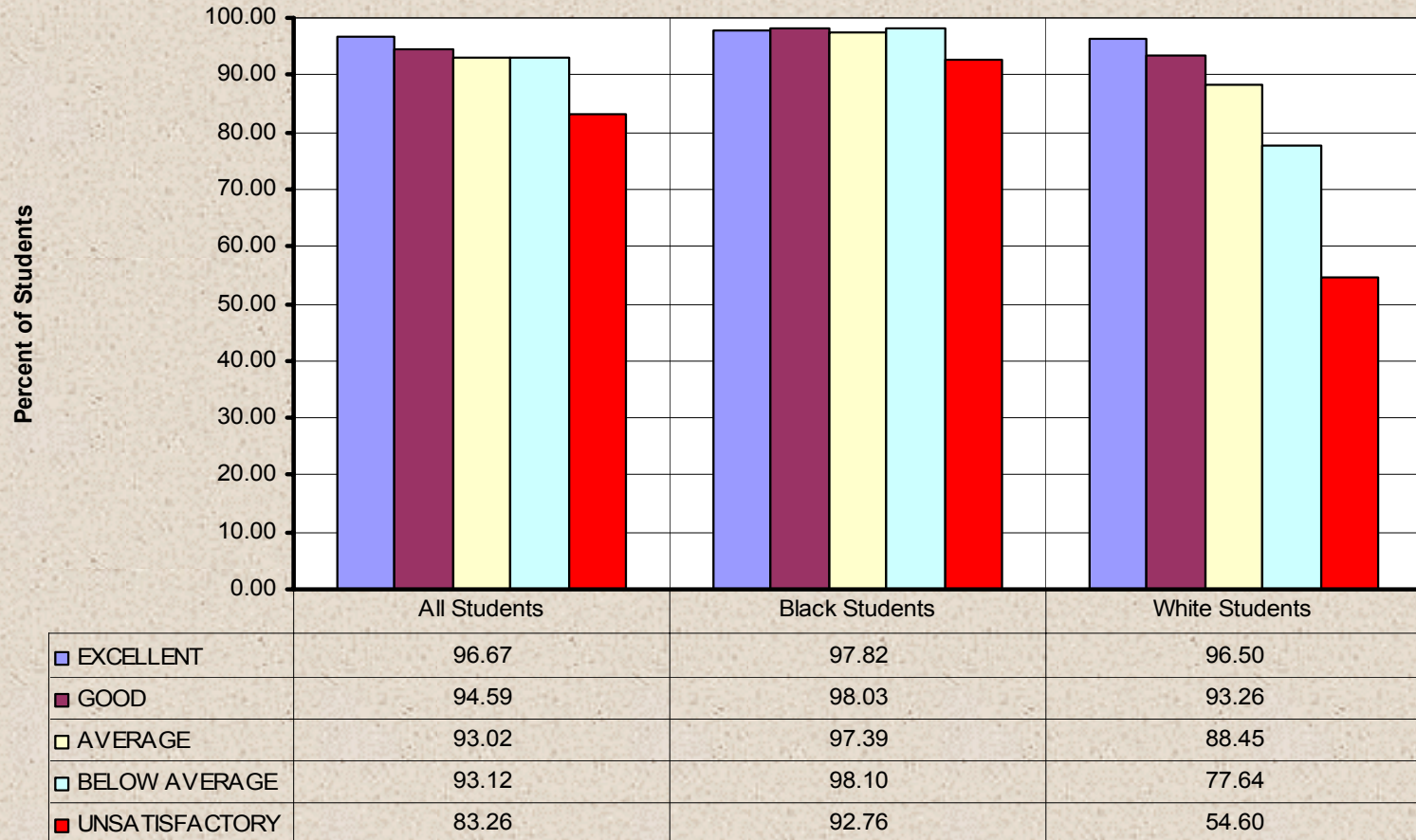


Public School Enrollment Grades 1-8 by Race



Public School Grades 9 – 12

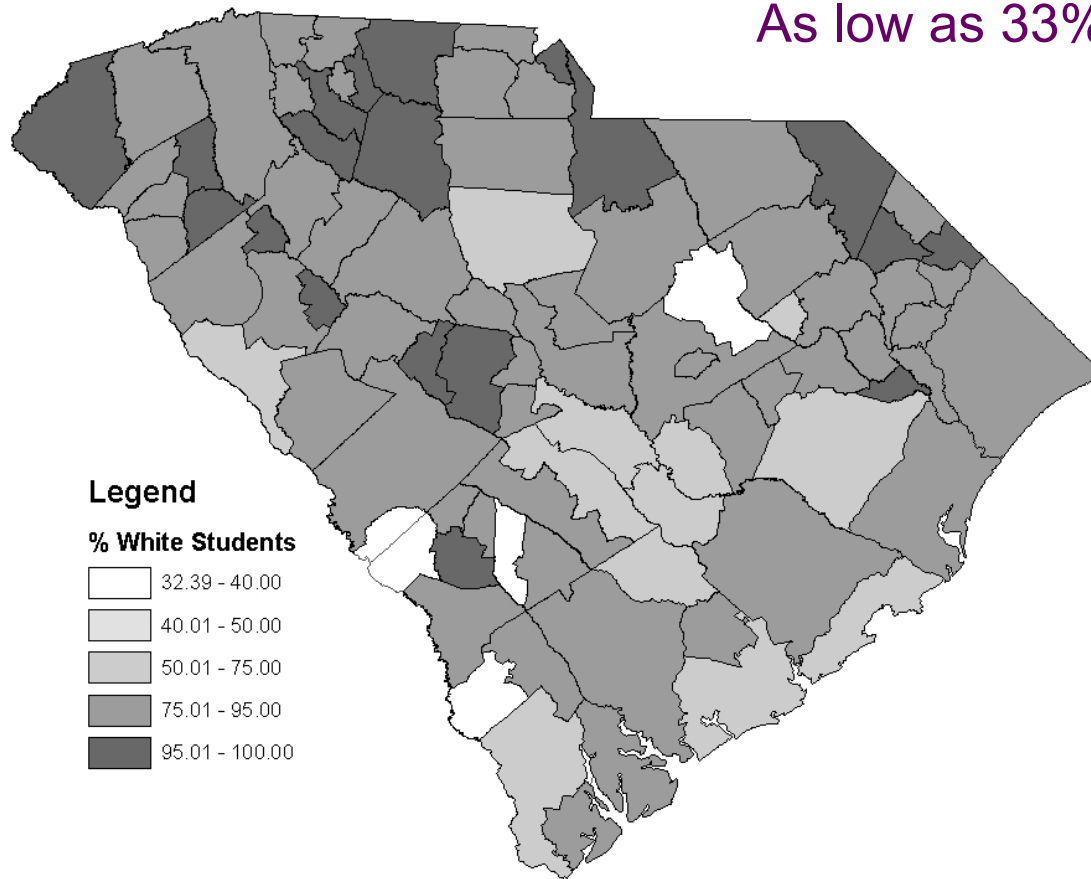
Percent by Race



White Participation Rate

White Student Participation Rate

As low as 33%



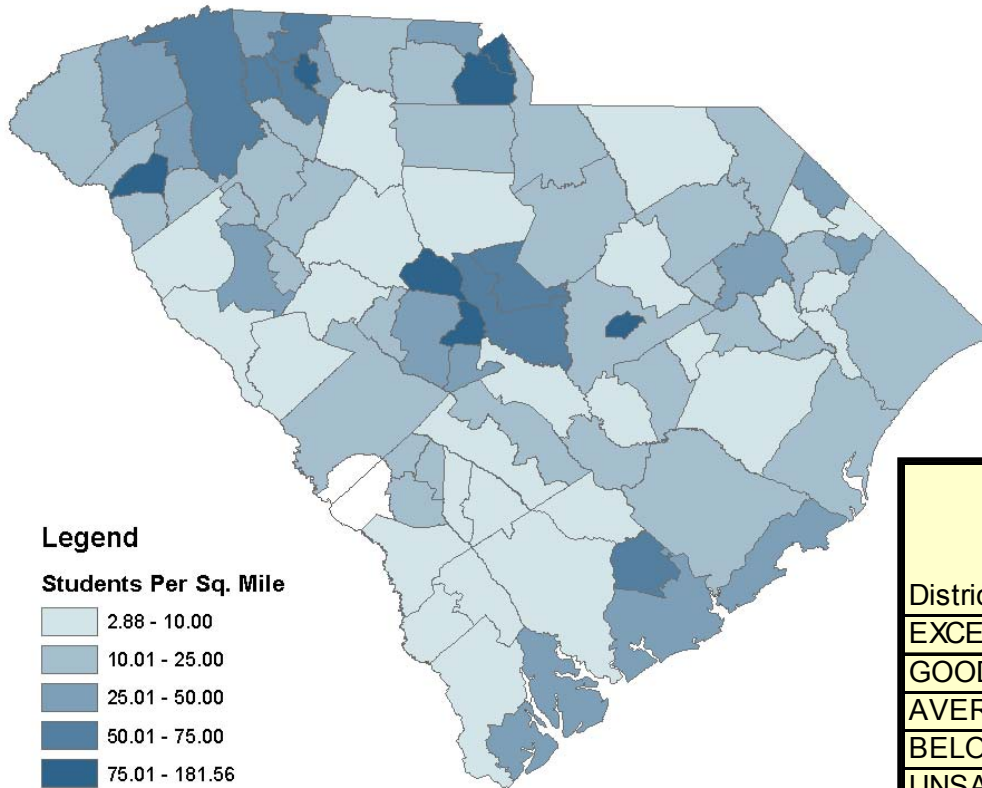
The Impact of Density

District Grade	Student Density Students/ Sq. Mile	Square Miles	Transportation Per Student	Net Change in Enrollment 1990 - 2000	% Change in Enrollment
EXCELLENT	93.2300	107.1	\$138	2501.0000	45.22%
GOOD	47.0615	281.0	\$147	1379.8846	13.11%
AVERAGE	22.6526	420.1	\$148	-148.7647	-1.56%
BELOW AVERAGE	9.6350	369.8	\$181	-338.0500	-9.91%
UNSATISFACTORY	7.7175	354.0	\$185	-254.2500	-10.76%

Huge differences in densities = huge differences in transportation costs

Density Matters

**Density of Students
Number of Students per Square Mile**



Legend

Students Per Sq. Mile

2.88 - 10.00
10.01 - 25.00
25.01 - 50.00
50.01 - 75.00
75.01 - 181.56

District Grade	Enrollment	Student Density Students/ Sq. Mile
EXCELLENT	9955.0000	93.2300
GOOD	11065.2692	47.0615
AVERAGE	8061.3529	22.6526
BELOW AVERAGE	3183.4000	9.6350
UNSATISFACTORY	2108.0000	7.7175

Size Versus Performance

- Simple analysis:
- *District size does not affect performance at any school level**
- However, there is a relationship between school size and performance:
- Students perform better in smaller High Schools and Middle Schools*
- There is no relationship between Elementary school size and performance*

*** Assumes holding poverty levels constant**

Size and Performance High Schools

**Expanded analysis: District size does affect
Performance**

For High Schools:

“...for South Carolina high schools, smaller school districts are more conducive to student achievement for schools containing low socioeconomic students or high poverty index values, while larger districts generate higher achievement levels for schools with low poverty levels.”

For Middle Schools

“...small schools in poor districts and large schools in more well to do districts tend to have a positive impact of school performance.” and

“...poor schools tend to do better in small districts while schools with less poverty do better in larger school districts.

It is thus apparent that for South Carolina middle schools, the impact of school or district size on student performance depends upon the socioeconomic status of the student being served.”

For Elementary Schools

“... that the relationship between size, socioeconomic status, and student performance is operative only at the middle and high school level.”

School District Size and Financial Efficiency

- “...in general larger districts operate at lower

Table 20

Group	Number	Average Size	Average Per Pupil Expenditures	Ratio to State Average
25,000->	5	36,103	\$6,345	1.001
15,000-24,999	6	17,506	\$5,921	.934
10,000-14,999	7	12,227	\$6,316	.996
5,000-9,999	21	7,570	\$6,383	1.007
2,500-4,999	23	3,642	\$6,477	1.017
0 – 2,499	24	1,478	\$7,062	1.114
State Total	86	7,551	\$6,338	1.000

“...at some point, the gains in efficiency due to economies of scale may disappear and in fact, reverse themselves.”

District Size and Financial Efficiency

Table 21

District Size	Expenditures Per Pupil	Ratio to State Average
58,019	\$5,737	.905
42,738	\$6,092	.961
27,282	\$7,020	1.107
26,471	\$7,858	1.240
26,007	\$5,872	.926

Recommendations

- 1. Undertake an immediate effort to *better educate* the public, legislature and educational community of the wide diversity in the environment in which students in South Carolina schools learn.

Recommendations

2. It is evident that poorly performing schools do not have the resources to allocate to instruction and teachers salaries as the higher performing districts. The state needs to *allocate additional state resources to poorly performing districts*. These are generally from poor, low-density school districts with little local ability to generate substantial local funds

Recommendations

- 3. Any proposals designed to reduce operational costs through consolidation of small districts needs to be carefully evaluated to ensure there are no indirect impacts on performance and increased transportation costs.
- 4. Due to the tremendous diversity in the 85 districts, consider eliminating Report Card grades for districts.

Recommendations

- 5. Revisit for possible reevaluation, the state funding formula for districts --- especially for those districts that are poor and low-density
- 6. More teachers with more advanced degrees need to be attracted to the poorly performing districts. The state needs to allocate additional resources to encourage teachers with more advanced degrees to the poor, low-density districts.

Recommendations

7. Undertake an evaluation of the professional development and distance learning opportunities and incentives for teachers in poorly performing districts